1077IHSSF2230

DocumentID NONCD0002832

Site Name MARY CHAPPEL RESIDENCE

DocumentType Risk Assessment (RISK)

RptSegment 1

DocDate 10/29/2008

DocRcvd 10/29/2008

Box SF2230

AccessLevel PUBLIC

Division WASTE MANAGEMENT

Section SUPERFUND

Program IHS (IHS)

DocCat FACILITY

SEAN BOYLES
IHS/DWM

Michael F. Easley, Governor

William G. Ross Jr., Secretary
North Carolina Department of Environment and Natural Resources

Coleen Sullins, Director
Division of Water Quality

October 29, 2008

To: Owner /Resident
Re: Water Sample Lab No. AB37049 (Richmond County/Chavis)

Recently, it has been discovered that some water supply wells in your area contain detectable amounts of pesticides and associated chemicals that were in use more than 25 years ago when this area was primarily agricultural land.

Below, please find information related to sampling conducted on the water supply well for this residence.

[✓] Based on the sample results, your water is safe for all uses. It is recommended that the water be tested every six months to make sure it is still safe.

[ ] Based on the sample results, elevated levels of the pesticides were detected. It is recommended that the water should not be used for cooking or drinking. Also, it is recommended that showering and bathing should be limited to less than 10 minutes.

The above usage guidelines were provided by Dr. Ken Rudo, toxicologist with the North Carolina Division of Public Health. **If you have further questions about the usage recommendations, Dr. Rudo can be reached at (919) 707-5911 or through the division's main number at (919) 707-5900.**

This well was sampled by the North Carolina Division of Water Quality. Samples of water were collected and analyzed for chemicals known as volatile organics. Volatile organics are manmade chemicals and are used in many applications, including pesticides. Although the chemicals detected in some of the wells in this area are no longer being used in pesticides, they can remain in the groundwater for long periods of time.

The Division of Water Quality is committed to providing you with additional information, as may be needed. If you have questions about the investigation of this issue, you may contact Stephen Barnhardt, Aquifer Protection Section Supervisor for the Fayetteville Regional Office by calling (910) 433-3336.

Sincerely,

JIM BARBER

FOR Stephen A. Barnhardt

NC DWQ Laboratory Section Results

County: RICHMOND
River Basin
Report To FROAP
Collector: B TODD
Region: FRO
Sample Matrix: GROUNDWATER
Loc. Type: WATER SUPPLY
Emergency Yes/No Yes
COC Yes/No Yes

Sample ID: AB37049
PO Number # 8G1446
Date Received: 10/24/2008
Time Received: 08:00
Labworks LoginID HPARKER
Date Reported: 10/27/08
Report Generated: 10/27/2008

VisitID

Loc. Descr.: 179 PEACH VIEW HAMLET

Location ID: FROAPNLC	Collect Date: 10/23/2008	Collect Time:: 13:43	Sample Depth

Sample Qualifiers and Comments

RECEIVED
OCT 29 2008
DENR - FAYETTEVILLE REGIONAL OFFICE

Routine Qualifiers

For a more detailed description of these qualifier codes refer to www.dwqlab.org under Staff Access

A-Value reported is the average of two or more determinations
B1-Countable membranes with <20 colonies; Estimated
B2- Counts from all filters were zero.
B3- Countable membranes with more than 60 or 80 colonies; Estimated
B4-Filters have counts of both >60 or 80 and < 20; Estimated
B5-Too many colonies were present; too numerous to count (TNTC)
J2- Reported value failed to meet QC criteria for either precision or accuracy; Estimated
J3-The sample matrix interfered with the ability to make any accurate determination; Estimated
J6-The lab analysis was from an unpreserved or improperly chemically preserved sample; Estimated
N1-The component has been tentatively identified based on mass spectral library search and has an estimated value
N3-Estimated concentration is < PQL and >MDL
NE-No established PQL
P-Elevated PQL due to matrix interference and/or sample dilution
Q1-Holding time exceeded prior to receipt at lab.
Q2- Holding time exceeded following receipt by lab
PQL- Practical Quantitation Limit-subject to change due to instrument sensitivity
U- Samples analyzed for this compound but not detected
X1- Sample not analyzed for this compound

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NC DWQ Laboratory Section Results

Location ID: FROAPNLC
Loc. Descr.: 179 PEACH VIEW HAMLET
Visit ID

Sample ID: AB37049
Collect Date: 10/23/2008
Collect Time:: 13:43

CAS #	Analyte Name	PQL	Result	Qualifier	Units	Analyst/Date	Approved By /Date
LAB							
	Sample temperature at receipt by lab		1.5		°C	DSAUNDERS	HPARKER
	Method Reference					10/24/08	10/24/08
VOL							
	Volatile Organics in liquid		_TITLE_		ug/L	ATERRY	RKELLING
	Method Reference EPA5030/624/8260					10/25/08	10/27/08
75-78-1	Dichlorodifluoromethane	1.0	Not detected		ug/L	ATERRY	RKELLING
	Method Reference EPA5030/624/8260					10/25/08	10/27/08
74-87-3	Chloromethane	0.50	Not detected		ug/L	ATERRY	RKELLING
	Method Reference EPA5030/624/8260					10/25/08	10/27/08
75-01-4	Vinyl Chloride	0.50	Not detected		ug/L	ATERRY	RKELLING
	Method Reference EPA5030/624/8260					10/25/08	10/27/08
74-83-9	Bromomethane	0.50	Not detected		ug/L	ATERRY	RKELLING
	Method Reference EPA5030/624/8260					10/25/08	10/27/08
75-00-3	Chloroethane	0.50	Not detected		ug/L	ATERRY	RKELLING
	Method Reference EPA5030/624/8260					10/25/08	10/27/08
75-69-4	Trichlorofluoromethane	0.50	Not detected		ug/L	ATERRY	RKELLING
	Method Reference EPA5030/624/8260					10/25/08	10/27/08
75-35-4	1,1-Dichloroethene	0.25	Not detected		ug/L	ATERRY	RKELLING
	Method Reference EPA5030/624/8260					10/25/08	10/27/08
75-09-2	Methylene Chloride	10	Not detected		ug/L	ATERRY	RKELLING
	Method Reference EPA5030/624/8260					10/25/08	10/27/08
156-60-5	trans-1,2-Dichloroethene	0.25	Not detected		ug/L	ATERRY	RKELLING
	Method Reference EPA5030/624/8260					10/25/08	10/27/08
1634-04-4	Methyl Tert-Butyl Ether	0.25	Not detected		ug/L	ATERRY	RKELLING
	Method Reference EPA5030/624/8260					10/25/08	10/27/08
75-34-3	1,1-Dichloroethane	0.25	Not detected		ug/L	ATERRY	RKELLING
	Method Reference EPA5030/624/8260					10/25/08	10/27/08
156-59-4	cis-1,2-Dichloroethene	0.25	Not detected		ug/L	ATERRY	RKELLING
	Method Reference EPA5030/624/8260					10/25/08	10/27/08
74-97-5	Bromochloromethane	0.25	Not detected		ug/L	ATERRY	RKELLING
	Method Reference EPA5030/624/8260					10/25/08	10/27/08
67-66-3	Chloroform	0.25	Not detected		ug/L	ATERRY	RKELLING
	Method Reference EPA5030/624/8260					10/25/08	10/27/08
590-20-7	2,2-Dichloropropane	0.25	Not detected		ug/L	ATERRY	RKELLING
	Method Reference EPA5030/624/8260					10/25/08	10/27/08

NC DWQ Laboratory Section Results

Location ID: FROAPNLC
Loc. Descr.: 179 PEACH VIEW HAMLET
Visit ID

Sample ID: AB37049
Collect Date: 10/23/2008
Collect Time:: 13:43

CAS #	Analyte Name	PQL	Result	Qualifier	Units	Analyst/Date	Approved By /Date
107-06-2	1,2-Dichloroethane	0.25	Not detected		ug/L	ATERRY 10/25/08	RKELLING 10/27/08
	Method Reference EPA5030/624/8260						
71-55-6	1,1,1-Trichloroethane	0.25	Not detected		ug/L	ATERRY 10/25/08	RKELLING 10/27/08
	Method Reference EPA5030/624/8260						
563-58-6	1,1-Dichloropropene	0.25	Not detected		ug/L	ATERRY 10/25/08	RKELLING 10/27/08
	Method Reference EPA5030/624/8260						
56-23-5	Carbon Tetrachloride	0.25	Not detected		ug/L	ATERRY 10/25/08	RKELLING 10/27/08
	Method Reference EPA5030/624/8260						
71-43-2	Benzene	0.25	Not detected		ug/L	ATERRY 10/25/08	RKELLING 10/27/08
	Method Reference EPA5030/624/8260						
74-95-3	Dibromomethane	1.0	Not detected		ug/L	ATERRY 10/25/08	RKELLING 10/27/08
	Method Reference EPA5030/624/8260						
78-87-5	1,2-Dichloropropane	0.25	Not detected		ug/L	ATERRY 10/25/08	RKELLING 10/27/08
	Method Reference EPA5030/624/8260						
79-01-6	Trichloroethene	0.25	0.14	N3	ug/L	ATERRY 10/25/08	RKELLING 10/27/08
	Method Reference EPA5030/624/8260						
75-27-4	Bromodichloromethane	0.25	Not detected		ug/L	ATERRY 10/25/08	RKELLING 10/27/08
	Method Reference EPA5030/624/8260						
10061-01-5	cis-1,3-Dichloropropene	0.25	Not detected		ug/L	ATERRY 10/25/08	RKELLING 10/27/08
	Method Reference EPA5030/624/8260						
10061-02-6	trans-1,3-Dichloropropene	0.25	Not detected		ug/L	ATERRY 10/25/08	RKELLING 10/27/08
	Method Reference EPA5030/624/8260						
79-00-5	1,1,2-Trichloroethane	0.25	Not detected		ug/L	ATERRY 10/25/08	RKELLING 10/27/08
	Method Reference EPA5030/624/8260						
108-88-3	Toluene	0.25	Not detected		ug/L	ATERRY 10/25/08	RKELLING 10/27/08
	Method Reference EPA5030/624/8260						
142-28-9	1,3-Dichloropropane	0.25	Not detected		ug/L	ATERRY 10/25/08	RKELLING 10/27/08
	Method Reference EPA5030/624/8260						
124-48-1	Dibromochloromethane	0.25	Not detected		ug/L	ATERRY 10/25/08	RKELLING 10/27/08
	Method Reference EPA5030/624/8260						
106-93-4	(EDB)1,2-Dibromoethane	0.25	Not detected		ug/L	ATERRY 10/25/08	RKELLING 10/27/08
	Method Reference EPA5030/624/8260						
127-18-4	Tetrachloroethene	0.25	Not detected		ug/L	ATERRY 10/25/08	RKELLING 10/27/08
	Method Reference EPA5030/624/8260						
108-90-7	Chlorobenzene	0.25	Not detected		ug/L	ATERRY 10/25/08	RKELLING 10/27/08
	Method Reference EPA5030/624/8260						

NC DWQ Laboratory Section Results

Location ID: FROAPNLC
Loc. Descr.: 179 PEACH VIEW HAMLET
Visit ID

Sample ID: AB37049
Collect Date: 10/23/2008
Collect Time:: 13:43

CAS #	Analyte Name	PQL	Result	Qualifier	Units	Analyst/Date	Approved By /Date
100-41-4	Ethylbenzene	0.25	Not detected		ug/L	ATERRY 10/25/08	RKELLING 10/27/08
	Method Reference EPA5030/624/8260						
75-25-2	Bromoform	1.0	Not detected		ug/L	ATERRY 10/25/08	RKELLING 10/27/08
	Method Reference EPA5030/624/8260						
108-38-3	m,p-Xylene	0.50	Not detected		ug/L	ATERRY 10/25/08	RKELLING 10/27/08
	Method Reference EPA5030/624/8260						
100-42-5	Styrene	0.25	Not detected		ug/L	ATERRY 10/25/08	RKELLING 10/27/08
	Method Reference EPA5030/624/8260						
79-34-5	1,1,2,2-Tetrachloroethane	0.25	Not detected		ug/L	ATERRY 10/25/08	RKELLING 10/27/08
	Method Reference EPA5030/624/8260						
630-20-6	1,1,1,2-Tetrachloroethane	0.25	Not detected		ug/L	ATERRY 10/25/08	RKELLING 10/27/08
	Method Reference EPA5030/624/8260						
95-47-6	o-Xylene	0.25	Not detected		ug/L	ATERRY 10/25/08	RKELLING 10/27/08
	Method Reference EPA5030/624/8260						
96-18-4	1,2,3-Trichloropropane	0.25	Not detected		ug/L	ATERRY 10/25/08	RKELLING 10/27/08
	Method Reference EPA5030/624/8260						
98-82-8	Isopropylbenzene	0.25	Not detected		ug/L	ATERRY 10/25/08	RKELLING 10/27/08
	Method Reference EPA5030/624/8260						
108-86-1	Bromobenzene	0.25	Not detected		ug/L	ATERRY 10/25/08	RKELLING 10/27/08
	Method Reference EPA5030/624/8260						
103-65-1	n-Propylbenzene	0.25	Not detected		ug/L	ATERRY 10/25/08	RKELLING 10/27/08
	Method Reference EPA5030/624/8260						
95-49-8	2-Chlorotoluene	0.25	Not detected		ug/L	ATERRY 10/25/08	RKELLING 10/27/08
	Method Reference EPA5030/624/8260						
106-43-4	4-Chlorotoluene	0.25	Not detected		ug/L	ATERRY 10/25/08	RKELLING 10/27/08
	Method Reference EPA5030/624/8260						
108-67-8	1,3,5-Trimethylbenzene	0.25	Not detected		ug/L	ATERRY 10/25/08	RKELLING 10/27/08
	Method Reference EPA5030/624/8260						
98-06-6	tert-Butylbenzene	0.25	Not detected		ug/L	ATERRY 10/25/08	RKELLING 10/27/08
	Method Reference EPA5030/624/8260						
95-63-6	1,2,4-Trimethylbenzene	0.25	Not detected		ug/L	ATERRY 10/25/08	RKELLING 10/27/08
	Method Reference EPA5030/624/8260						
135-98-8	sec-Butylbenzene	0.25	Not detected		ug/L	ATERRY 10/25/08	RKELLING 10/27/08
	Method Reference EPA5030/624/8260						
543-73-1	m-Dichlorobenzene (1,3)	0.25	Not detected		ug/L	ATERRY 10/25/08	RKELLING 10/27/08
	Method Reference EPA5030/624/8260						

NC DWQ Laboratory Section Results

Location ID: FROAPNLC
Loc. Descr.: 179 PEACH VIEW HAMLET
Visit ID

Sample ID: AB37049
Collect Date: 10/23/2008
Collect Time:: 13:43

CAS #	Analyte Name	PQL	Result	Qualifier	Units	Analyst/Date	Approved By /Date
106-46-7	p-Dichlorobenzene (1,4)	0.25	Not detected		ug/L	ATERRY 10/25/08	RKELLING 10/27/08
	Method Reference EPA5030/624/8260						
95-50-1	o-Dichlorobenzene (1,2)	0.25	Not detected		ug/L	ATERRY 10/25/08	RKELLING 10/27/08
	Method Reference EPA5030/624/8260						
99-87-6	p-Isopropyltoluene	0.25	Not detected		ug/L	ATERRY 10/25/08	RKELLING 10/27/08
	Method Reference EPA5030/624/8260						
104-51-8	n-Butylbenzene	0.25	Not detected		ug/L	ATERRY 10/25/08	RKELLING 10/27/08
	Method Reference EPA5030/624/8260						
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	Not detected		ug/L	ATERRY 10/25/08	RKELLING 10/27/08
	Method Reference EPA5030/624/8260						
120-82-1	1,2,4-Trichlorobenzene	0.50	Not detected		ug/L	ATERRY 10/25/08	RKELLING 10/27/08
	Method Reference EPA5030/624/8260						
91-20-3	Naphthalene	0.50	Not detected		ug/L	ATERRY 10/25/08	RKELLING 10/27/08
	Method Reference EPA5030/624/8260						
87-68-3	Hexachlorobutadiene	0.50	Not detected		ug/L	ATERRY 10/25/08	RKELLING 10/27/08
	Method Reference EPA5030/624/8260						
87-61-6	1,2,3-Trichlorobenzene	1.0	Not detected		ug/L	ATERRY 10/25/08	RKELLING 10/27/08
	Method Reference EPA5030/624/8260						

GROUNDWATER FIELD/LAB FORM

CoC. Email

North Carolina
Department of Environment and Natural Resources
DIVISION OF WATER QUALITY-GROUNDWATER SECTION

Location code [redacted]6107179 PV

County Richmond

Quad No _____ Serial No. _____

Lat. _____ Long. _____

SAMPLE TYPE: ☑ Water ☐ Soil ☐ Other ☑ Chain of Custody

SAMPLE PRIORITY: ☐ Routine ☑ Emergency

179PV

Lab Number SG1446 AB37049

Date Received 10-24-08 Time: 0800

Rec'd By: HP From: Bus, Courier, Hand Del.,

Other: _____

Data Entry By: _____ Ck: _____

Date Reported: _____

Report To: ARO, (FRO), MRO, RRO, WaRO, WiRO, WSRO, Kinston FO, Fed. Trust, Central Off., Other: _____

Shipped by: Bus, (Courier) Hand Del., Other: _____

Collector(s): BillTodd _____ Date 10/23/08 Time 1:43

Purpose: Baseline, (Complaint) Compliance, LUST, Pesticide Study, Federal Trust, Other: _____ (circle one)

FIELD ANALYSES

pH 400 _____ Spec. Cond. 94 _____ at 25°C

Temp. 10 _____ °C Odor _____

Appearance _____

Field Analysis By: BillTodd _____

Owner Marshall Chavis

Location or Site 179 Peach View Hamlet

Description of sampling point outside tap

Sampling Method pump (Pump, bailer, etc.) Sample Interval _____

Remarks _____ (Pumping time, air temp., etc.)

LABORATORY ANALYSES

	BOD 310	mg/L
	COD High 340	mg/L
	COD Low 335	mg/L
	Coliform: MF Fecal 31616	/100ml
	Coliform: MF Total 31504	/100ml
	TOC 680	mg/L
	Turbidity 76	NTU
	Residue, Suspended 530	mg/L
	pH 403	units
	Alkalinity to pH 4.5 410	mg/L
	Alkalinity to pH 8.3 415	mg/L
	Carbonate 445	mg/L
	Bicarbonate 440	mg/L
	Carbon dioxide 405	mg/L
	Chloride 940	mg/L
	Chromium: Hex 1032	ug/L
	Color: True 80	CU
	Cyanide 720	mg/L

	Diss. Solids 70300	mg/L
	Fluoride 951	mg/L
	Hardness: Total 900	mg/L
	Hardness (non-carb) 902	mg/L
	Phenols 32730	ug/l
	Specific Cond. 95	uMhos/cm
	Sulfate 945	mg/L
	Sulfide 745	mg/L
	Oil and Grease	mg/L
	NH_3 as N 610	mg/L
	TKN as N 625	mg/L
	$NO_2 + NO_3$ as N 630	mg/L
	P: Total as P 665	mg/L
	Nitrate (NO_3 as N) 620	mg/L
	Nitrite (NO_2 as N) 615	mg/L

	Ag-Silver 46566	ug/L
	Al-Aluminum 46557	ug/L
	As-Arsenic 46551	ug/L
	Ba-Barium 46558	ug/L
	Ca-Calcium 46552	mg/L
	Cd-Cadmium 46559	ug/L
	Cr-Chromium 46559	ug/L
	Cu-Copper 46562	ug/L
	Fe-Iron 46563	ug/L
	Hg-Mercury 71900	ug/L
	K-Potassium 46555	mg/L
	Mg-Magnesium 46554	mg/L
	Mn-Manganese 46565	ug/L
	Na-Sodium 46556	mg/L
	Ni-Nickel	ug/L
	Pb-Lead 46564	ug/L
	Se-Selenium	ug/L
	Zn-Zinc 46567	ug/L

	Organochlorine Pesticides
	Organophosphorus Pesticides
	Nitrogen Pesticides
	Acid Herbicides
	PCBs
	Semivolatile Organics
	TPH-Diesel Range
X	Volatile Organics (VOA bottle)
	TPH-Gasoline Range
	TPH-BTEX Gasoline Range

LAB USE ONLY
Temperature on arrival (°C): 1.5

Lab Comments _____

GW-54 REV 7/03 For Dissolved Analysis-submit filtered sample and write "DIS" in block.

SEAN BOYLES
IHS/DWM

Michael F. Easley, Governor
William G. Ross Jr., Secretary
North Carolina Department of Environment and Natural Resources

Coleen Sullins, Director
Division of Water Quality

October 20, 2008

To: Owner /Resident
Re: Water Sample Lab No. AB36343

Recently, it has been discovered that some water supply wells in your area contain detectable amounts of pesticides and associated chemicals that were in use more than 25 years ago when this area was primarily agricultural land.

Below, please find information related to sampling conducted on the water supply well for this residence.

[✓] Based on the sample results, your water is safe for all uses. It is recommended that the water be tested every six months to make sure it is still safe.

[ ] Based on the sample results, elevated levels of the pesticides were detected. It is recommended that the water should not be used for cooking or drinking. Also, it is recommended that showering and bathing should be limited to less than 10 minutes.

The above usage guidelines were provided by Dr. Ken Rudo, toxicologist with the North Carolina Division of Public Health. **If you have further questions about the usage recommendations, Dr. Rudo can be reached at (919) 707-5911 or through the division's main number at (919) 707-5900.**

This well was sampled by the North Carolina Division of Water Quality. Samples of water were collected and analyzed for chemicals known as volatile organics. Volatile organics are manmade chemicals and are used in many applications, including pesticides. Although the chemicals detected in some of the wells in this area are no longer being used in pesticides, they can remain in the groundwater for long periods of time.

The Division of Water Quality is committed to providing you with additional information, as may be needed. If you have questions about the investigation of this issue, you may contact Stephen Barnhardt, Aquifer Protection Section Supervisor for the Fayetteville Regional Office by calling (910) 433-3336.

Sincerely,

Jim Barber

FOR Stephen A. Barnhardt

NC DWQ Laboratory Section Results

County: RICHMOND
River Basin
Report To FROAP
Collector: B TODD
Region: FRO
Sample Matrix: GROUNDWATER
Loc. Type: WATER SUPPLY
Emergency Yes/No YES
COC Yes/No YES

DIVISION OF WATER QUALITY DWQ

Sample ID: AB36343
PO Number # 8G1374
Date Received: 10/08/2008
Time Received: 07:45
Labworks LoginID SMATHIS
Date Reported: 10/10/08
Report Generated: 10/10/2008

VisitID

Loc. Descr.: JOHN RUSSELL

QC 10/10/08

Location ID: 6I077289FR	Collect Date: 10/07/2008	Collect Time:: 11:34	Sample Depth

Sample Qualifiers and Comments

RECEIVED
OCT 20 2008
DENR - FAYETTEVILLE REGIONAL OFFICE

Routine Qualifiers

For a more detailed description of these qualifier codes refer to www.dwqlab.org under Staff Access

A-Value reported is the average of two or more determinations
B1-Countable membranes with <20 colonies; Estimated
B2- Counts from all filters were zero.
B3- Countable membranes with more than 60 or 80 colonies; Estimated
B4-Filters have counts of both >60 or 80 and < 20; Estimated
B5-Too many colonies were present; too numerous to count (TNTC)
J2- Reported value failed to meet QC criteria for either precision or accuracy; Estimated
J3-The sample matrix interfered with the ability to make any accurate determination; Estimated
J6-The lab analysis was from an unpreserved or improperly chemically preserved sample; Estimated
N1-The component has been tentatively identified based on mass spectral library search and has an estimated value
N3-Estimated concentration is < PQL and >MDL
NE-No established PQL
P-Elevated PQL due to matrix interference and/or sample dilution
Q1-Holding time exceeded prior to receipt at lab.
Q2- Holding time exceeded following receipt by lab
PQL- Practical Quantitation Limit-subject to change due to instrument sensitivity
U- Samples analyzed for this compound but not detected
X1- Sample not analyzed for this compound

I AR

NC DWQ Laboratory Section Results

Location ID: 6I077289FR
Loc. Descr.: JOHN RUSSELL
Visit ID

Sample ID: AB36343
Collect Date: 10/07/2008
Collect Time:: 11:34

CAS #	Analyte Name	PQL	Result	Qualifier	Units	Analyst/Date	Approved By /Date
LAB							
	Sample temperature at receipt by lab		1.9		°C	DSAUNDERS 10/8/08	SMATHIS 10/8/08
	Method Reference						
VOL							
	Volatile Organics in liquid		_TITLE_		ug/L	ATERRY 10/8/08	RKELLING 10/9/08
	Method Reference EPA5030/624/8260						
75-78-1	Dichlorodifluoromethane	1.0	Not detected		ug/L	ATERRY 10/8/08	RKELLING 10/9/08
	Method Reference EPA5030/624/8260						
74-87-3	Chloromethane	0.50	Not detected		ug/L	ATERRY 10/8/08	RKELLING 10/9/08
	Method Reference EPA5030/624/8260						
75-01-4	Vinyl Chloride	0.50	Not detected		ug/L	ATERRY 10/8/08	RKELLING 10/9/08
	Method Reference EPA5030/624/8260						
74-83-9	Bromomethane	0.50	Not detected		ug/L	ATERRY 10/8/08	RKELLING 10/9/08
	Method Reference EPA5030/624/8260						
75-00-3	Chloroethane	0.50	Not detected		ug/L	ATERRY 10/8/08	RKELLING 10/9/08
	Method Reference EPA5030/624/8260						
75-69-4	Trichlorofluoromethane	0.50	Not detected		ug/L	ATERRY 10/8/08	RKELLING 10/9/08
	Method Reference EPA5030/624/8260						
75-35-4	1,1-Dichloroethene	0.25	Not detected		ug/L	ATERRY 10/8/08	RKELLING 10/9/08
	Method Reference EPA5030/624/8260						
75-09-2	Methylene Chloride	10	Not detected		ug/L	ATERRY 10/8/08	RKELLING 10/9/08
	Method Reference EPA5030/624/8260						
156-60-5	trans-1,2-Dichloroethene	0.25	Not detected		ug/L	ATERRY 10/8/08	RKELLING 10/9/08
	Method Reference EPA5030/624/8260						
1634-04-4	Methyl Tert-Butyl Ether	0.25	Not detected		ug/L	ATERRY 10/8/08	RKELLING 10/9/08
	Method Reference EPA5030/624/8260						
75-34-3	1,1-Dichloroethane	0.25	Not detected		ug/L	ATERRY 10/8/08	RKELLING 10/9/08
	Method Reference EPA5030/624/8260						
156-59-4	cis-1,2-Dichloroethene	0.25	Not detected		ug/L	ATERRY 10/8/08	RKELLING 10/9/08
	Method Reference EPA5030/624/8260						
74-97-5	Bromochloromethane	0.25	Not detected		ug/L	ATERRY 10/8/08	RKELLING 10/9/08
	Method Reference EPA5030/624/8260						
67-66-3	Chloroform	0.25	1.8		ug/L	ATERRY 10/8/08	RKELLING 10/9/08
	Method Reference EPA5030/624/8260						
590-20-7	2,2-Dichloropropane	0.25	Not detected		ug/L	ATERRY 10/8/08	RKELLING 10/9/08
	Method Reference EPA5030/624/8260						

NC DWQ Laboratory Section Results

Location ID: 6I077289FR
Loc. Descr.: JOHN RUSSELL
Visit ID

Sample ID: AB36343
Collect Date: 10/07/2008
Collect Time:: 11:34

CAS #	Analyte Name	PQL	Result	Qualifier	Units	Analyst/Date	Approved By /Date
107-06-2	1,2-Dichloroethane	0.25	Not detected		ug/L	ATERRY 10/8/08	RKELLING 10/9/08
	Method Reference EPA5030/624/8260						
71-55-6	1,1,1-Trichloroethane	0.25	Not detected		ug/L	ATERRY 10/8/08	RKELLING 10/9/08
	Method Reference EPA5030/624/8260						
563-58-6	1,1-Dichloropropene	0.25	Not detected		ug/L	ATERRY 10/8/08	RKELLING 10/9/08
	Method Reference EPA5030/624/8260						
56-23-5	Carbon Tetrachloride	0.25	Not detected		ug/L	ATERRY 10/8/08	RKELLING 10/9/08
	Method Reference EPA5030/624/8260						
71-43-2	Benzene	0.25	Not detected		ug/L	ATERRY 10/8/08	RKELLING 10/9/08
	Method Reference EPA5030/624/8260						
74-95-3	Dibromomethane	1.0	Not detected		ug/L	ATERRY 10/8/08	RKELLING 10/9/08
	Method Reference EPA5030/624/8260						
78-87-5	1,2-Dichloropropane	0.25	Not detected		ug/L	ATERRY 10/8/08	RKELLING 10/9/08
	Method Reference EPA5030/624/8260						
79-01-6	Trichloroethene	0.25	Not detected		ug/L	ATERRY 10/8/08	RKELLING 10/9/08
	Method Reference EPA5030/624/8260						
75-27-4	Bromodichloromethane	0.25	1.3		ug/L	ATERRY 10/8/08	RKELLING 10/9/08
	Method Reference EPA5030/624/8260						
10061-01-5	cis-1,3-Dichloropropene	0.25	Not detected		ug/L	ATERRY 10/8/08	RKELLING 10/9/08
	Method Reference EPA5030/624/8260						
10061-02-6	trans-1,3-Dichloropropene	0.25	Not detected		ug/L	ATERRY 10/8/08	RKELLING 10/9/08
	Method Reference EPA5030/624/8260						
79-00-5	1,1,2-Trichloroethane	0.25	Not detected		ug/L	ATERRY 10/8/08	RKELLING 10/9/08
	Method Reference EPA5030/624/8260						
108-88-3	Toluene	0.25	0.23	N3	ug/L	ATERRY 10/8/08	RKELLING 10/9/08
	Method Reference EPA5030/624/8260						
142-28-9	1,3-Dichloropropane	0.25	Not detected		ug/L	ATERRY 10/8/08	RKELLING 10/9/08
	Method Reference EPA5030/624/8260						
124-48-1	Dibromochloromethane	0.25	1.4		ug/L	ATERRY 10/8/08	RKELLING 10/9/08
	Method Reference EPA5030/624/8260						
106-93-4	(EDB)1,2-Dibromoethane	0.25	Not detected		ug/L	ATERRY 10/8/08	RKELLING 10/9/08
	Method Reference EPA5030/624/8260						
127-18-4	Tetrachloroethene	0.25	Not detected		ug/L	ATERRY 10/8/08	RKELLING 10/9/08
	Method Reference EPA5030/624/8260						
108-90-7	Chlorobenzene	0.25	Not detected		ug/L	ATERRY 10/8/08	RKELLING 10/9/08
	Method Reference EPA5030/624/8260						

Location ID: 6I077289FR
Loc. Descr.: JOHN RUSSELL
Visit ID

NC DWQ Laboratory Section Results

Sample ID: AB36343
Collect Date: 10/07/2008
Collect Time:: 11:34

CAS #	Analyte Name	PQL	Result	Qualifier	Units	Analyst/Date	Approved By /Date
100-41-4	Ethylbenzene	0.25	Not detected		ug/L	ATERRY 10/8/08	RKELLING 10/9/08
	Method Reference EPA5030/624/8260						
75-25-2	Bromoform	1.0	0.73	N3	ug/L	ATERRY 10/8/08	RKELLING 10/9/08
	Method Reference EPA5030/624/8260						
108-38-3	m,p-Xylene	0.50	Not detected		ug/L	ATERRY 10/8/08	RKELLING 10/9/08
	Method Reference EPA5030/624/8260						
100-42-5	Styrene	0.25	Not detected		ug/L	ATERRY 10/8/08	RKELLING 10/9/08
	Method Reference EPA5030/624/8260						
79-34-5	1,1,2,2-Tetrachloroethane	0.25	Not detected		ug/L	ATERRY 10/8/08	RKELLING 10/9/08
	Method Reference EPA5030/624/8260						
630-20-6	1,1,1,2-Tetrachloroethane	0.25	Not detected		ug/L	ATERRY 10/8/08	RKELLING 10/9/08
	Method Reference EPA5030/624/8260						
95-47-6	o-Xylene	0.25	Not detected		ug/L	ATERRY 10/8/08	RKELLING 10/9/08
	Method Reference EPA5030/624/8260						
96-18-4	1,2,3-Trichloropropane	0.25	Not detected		ug/L	ATERRY 10/8/08	RKELLING 10/9/08
	Method Reference EPA5030/624/8260						
98-82-8	Isopropylbenzene	0.25	Not detected		ug/L	ATERRY 10/8/08	RKELLING 10/9/08
	Method Reference EPA5030/624/8260						
108-86-1	Bromobenzene	0.25	Not detected		ug/L	ATERRY 10/8/08	RKELLING 10/9/08
	Method Reference EPA5030/624/8260						
103-65-1	n-Propylbenzene	0.25	Not detected		ug/L	ATERRY 10/8/08	RKELLING 10/9/08
	Method Reference EPA5030/624/8260						
95-49-8	2-Chlorotoluene	0.25	Not detected		ug/L	ATERRY 10/8/08	RKELLING 10/9/08
	Method Reference EPA5030/624/8260						
106-43-4	4-Chlorotoluene	0.25	Not detected		ug/L	ATERRY 10/8/08	RKELLING 10/9/08
	Method Reference EPA5030/624/8260						
108-67-8	1,3,5-Trimethylbenzene	0.25	Not detected		ug/L	ATERRY 10/8/08	RKELLING 10/9/08
	Method Reference EPA5030/624/8260						
98-06-6	tert-Butylbenzene	0.25	Not detected		ug/L	ATERRY 10/8/08	RKELLING 10/9/08
	Method Reference EPA5030/624/8260						
95-63-6	1,2,4-Trimethylbenzene	0.25	Not detected		ug/L	ATERRY 10/8/08	RKELLING 10/9/08
	Method Reference EPA5030/624/8260						
135-98-8	sec-Butylbenzene	0.25	Not detected		ug/L	ATERRY 10/8/08	RKELLING 10/9/08
	Method Reference EPA5030/624/8260						
543-73-1	m-Dichlorobenzene (1,3)	0.25	Not detected		ug/L	ATERRY 10/8/08	RKELLING 10/9/08
	Method Reference EPA5030/624/8260						

NC DWQ Laboratory Section Results

Location ID: 6I077289FR
Loc. Descr.: JOHN RUSSELL
Visit ID

Sample ID: AB36343
Collect Date: 10/07/2008
Collect Time:: 11:34

CAS #	Analyte Name	PQL	Result	Qualifier	Units	Analyst/Date	Approved By /Date
106-46-7	p-Dichlorobenzene (1,4)	0.25	Not detected		ug/L	ATERRY 10/8/08	RKELLING 10/9/08
	Method Reference EPA5030/624/8260						
95-50-1	o-Dichlorobenzene (1,2)	0.25	Not detected		ug/L	ATERRY 10/8/08	RKELLING 10/9/08
	Method Reference EPA5030/624/8260						
99-87-6	p-Isopropyltoluene	0.25	Not detected		ug/L	ATERRY 10/8/08	RKELLING 10/9/08
	Method Reference EPA5030/624/8260						
104-51-8	n-Butylbenzene	0.25	Not detected		ug/L	ATERRY 10/8/08	RKELLING 10/9/08
	Method Reference EPA5030/624/8260						
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	Not detected		ug/L	ATERRY 10/8/08	RKELLING 10/9/08
	Method Reference EPA5030/624/8260						
120-82-1	1,2,4-Trichlorobenzene	0.50	Not detected		ug/L	ATERRY 10/8/08	RKELLING 10/9/08
	Method Reference EPA5030/624/8260						
91-20-3	Naphthalene	0.50	Not detected		ug/L	ATERRY 10/8/08	RKELLING 10/9/08
	Method Reference EPA5030/624/8260						
87-68-3	Hexachlorobutadiene	0.50	Not detected		ug/L	ATERRY 10/8/08	RKELLING 10/9/08
	Method Reference EPA5030/624/8260						
87-61-6	1,2,3-Trichlorobenzene	1.0	Not detected		ug/L	ATERRY 10/8/08	RKELLING 10/9/08
	Method Reference EPA5030/624/8260						

GROUNDWATER FIELD/LAB FORM

COC

North Carolina
Department of Environment and Natural Resources
DIVISION OF WATER QUALITY-GROUNDWATER SECTION

Location code [redacted]6I077289FR

SAMPLE TYPE: ☑ Water ☐ Soil ☐ Other ☑ Chain of Custody

SAMPLE PRIORITY: ☐ Routine ☑ Emergency

289FR

Lab Number 8G1374 AB36343

Date Received 10-08-08 Time: 0745

Rec'd By: From: Bus, Courier, Hand Del.,

Other: HP

Data Entry By: Ck:

Date Reported:

County Richmond

Quad No Serial No.

Lat. Long.

Report To: ARO, FRO, MRO, RRO, WaRO, WiRO, WSRO, Kinston FO, Fed. Trust, Central Off., Other:

Shipped by: Bus, Courier, Hand Del., Other:

Collector(s): BillTodd

Date 10/7/08 Time 11:34

Purpose: Baseline, Complaint, Compliance, LUST, Pesticide Study, Federal Trust, Other: (circle one)

FIELD ANALYSES

pH 400 Spec. Cond. 94 at 25°C

Temp. 10 °C Odor

Appearance

Field Analysis By: BillTodd

Owner John Russell

Location or Site 289 Fox Road

Description of sampling point outside tap

Sampling Method pump (Pump, bailer, etc.)

Sample Interval

Remarks New construction (Pumping time, air temp., etc.)

LABORATORY ANALYSES

	BOD 310	mg/L
	COD High 340	mg/L
	COD Low 335	mg/L
	Coliform: MF Fecal 31616	/100ml
	Coliform: MF Total 31504	/100ml
	TOC 680	mg/L
	Turbidity 76	NTU
	Residue, Suspended 530	mg/L
	pH 403	units
	Alkalinity to pH 4.5 410	mg/L
	Alkalinity to pH 8.3 415	mg/L
	Carbonate 445	mg/L
	Bicarbonate 440	mg/L
	Carbon dioxide 405	mg/L
	Chloride 940	mg/L
	Chromium: Hex 1032	ug/L
	Color: True 80	CU
	Cyanide 720	mg/L

	Diss. Solids 70300	mg/L
	Fluoride 951	mg/L
	Hardness: Total 900	mg/L
	Hardness (non-carb) 902	mg/L
	Phenols 32730	ug/l
	Specific Cond. 95	uMhos/cm
	Sulfate 945	mg/L
	Sulfide 745	mg/L
	Oil and Grease	mg/L
	NH_3 as N 610	mg/L
	TKN as N 625	mg/L
	$NO_2 + NO_3$ as N 630	mg/L
	P: Total as P 665	mg/L
	Nitrate (NO_3 as N) 620	mg/L
	Nitrite (NO_2 as N) 615	mg/L

	Ag-Silver 46566	ug/L
	Al-Aluminum 46557	ug/L
	As-Arsenic 46551	ug/L
	Ba-Barium 46558	ug/L
	Ca-Calcium 46552	mg/L
	Cd-Cadmium 46559	ug/L
	Cr-Chromium 46559	ug/L
	Cu-Copper 46562	ug/L
	Fe-Iron 46563	ug/L
	Hg-Mercury 71900	ug/L
	K-Potassium 46555	mg/L
	Mg-Magnesium 46554	mg/L
	Mn-Manganese 46565	ug/L
	Na-Sodium 46556	mg/L
	Ni-Nickel	ug/L
	Pb-Lead 46564	ug/L
	Se-Selenium	ug/L
	Zn-Zinc 46567	ug/L

	Organochlorine Pesticides
	Organophosphorus Pesticides
	Nitrogen Pesticides
	Acid Herbicides
	PCBs
	Semivolatile Organics
	TPH-Diesel Range
X	Volatile Organics (VOA bottle)
	TPH-Gasoline Range
	TPH-BTEX Gasoline Range

LAB USE ONLY
Temperature on arrival (°C): 1.9

Lab Comments

GW-54 REV. 7/03 For Dissolved Analysis-submit filtered sample and write "DIS" in block.

NCDENR
North Carolina Department of Environment and Natural Resources

Dexter R. Matthews, Director

Division of Waste Management

Michael F. Easley, Governor
William G. Ross Jr., Secretary

October 3, 2008

Ms. Mary Chapell
1061 Hwy 177 North
Hamlet, North Carolina

Subject: Health Risk Evaluation and Alternate Water Service Request
Mary Chappell Residence, 1061 HWY 177, Hamlet, Richmond County

Dear Ms. Chappell:

This is to inform you that the incident management responsibilities for the above-referenced pollution site have recently changed from the Aquifer Protection Section to the Division of Waste Management's Inactive Sites Branch (IHSB) in the Fayetteville Regional Office. Attached you will find a copy of the health risk evaluation with recommendations concerning the continued use of your supply well. Also attached is an affidavit that should be completed to determine if you qualify for potential assistance in obtaining alternate water service through the Bernard Allen Memorial Drinking Water Fund.

You may already be receiving bottled water service because of an investigation that is being conducted to investigate pesticides and associated chemicals around peach orchards. However, the constituent that is showing up in your supply well is typically related to dry cleaning operations or as solvents used in automotive work. Because the contamination found in your well is not a pesticide, the bottled water service could be discontinued at any time.

Therefore, you should review the attached affidavit to be signed and notarized to determine if you meet the requirements for eligibility. If you do qualify, please return the completed affidavit in the enclosed envelope in order that we may be able to recommend it to the Department of Environment, Health and Natural Resources for potential assistance through the Bernard Allen Fund.

Should you have any questions or concerns about this information, please feel free to call me at 910.433.3345.

Sincerely,

P. Sean Boyles, L.G.
Hydro geologist
Inactive Hazardous Sites Branch

Attachment

cc: Cindy Pearson, 1217 HWY 177 North, Mariston, NC 28363
IHS Files

Memorandum:

Date: September 25, 2008

TO: Sean Boyles
Fayetteville Regional Office
Inactive Hazardous Sites Branch

FROM: Hanna Assefa
Industrial Hygiene Consultant
Inactive Hazardous Sites Branch

RE: Health Risk Evaluation
Mary Chappel Residence
1061 Hwy 177 North,
Hamlet, Richmond County, North Carolina

During this sampling event, one contaminant was detected in the well water. The contaminant, trichloroethene, was detected at a concentration exceeding the applicable water standard. The standards used to determine if the water is suitable for drinking and cooking are the United States Environmental Protection Agency's Maximum Contaminant Levels (MCLs) or, if no MCLs exist, North Carolina Groundwater Standards (2L).

If the contaminant concentration exceeds the applicable standard for using the water for drinking and cooking, the contaminant concentration is further analyzed to determine if the water is suitable for other household uses, such as showering, bathing, washing dishes, flushing toilets, and hand washing. **Based on this evaluation the water from this well should not be used for drinking and cooking. The water from this well can be used for all other purposes described above.** The table below compares the detected contaminant concentration with the applicable standards:

Sample ID	Contaminant	Concentration (ug/l)	MCL (ug/l)	2L (ug/l)
GWO -77142	Trichloroethene	36	5	NA

Shaded boxes indicate a standard has been exceeded.
NA – Not Applicable

NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

IN THE MATTER OF: Bernard Allen Memorial Emergency Drinking Water Fund Eligibility by Mary Chappell

UNDER THE AUTHORITY OF NORTH CAROLINA GENERAL STATUTES § 87-98	)))	**AFFIDAVIT RE: Household Income Verification**

Kenneth Vernon, being duly sworn, hereby deposes and says:

1. I am/we are the owner of property generally referred to as 1061 HWY 177 North, Hamlet, Richmond County, North Carolina.

2. I am/we are applying for eligibility under the North Carolina General Statute (N.C.G.S.) § 87-98 (Bernard Allen Memorial Emergency Drinking Water Fund) for an alternate water supply for the property generally referred to as 1061 HWY 177 North, Hamlet, Richmond County, North Carolina.

3. I/We hereby certify, under the pains and penalties of perjury, that I/We meet the eligibility requirements of N.C.G.S. § 87-98(c), in that my/our household gross income for calendar year **2006** is not greater than three hundred percent (300%) of the current federal poverty guidelines determined by the US Department of Health and Human Services, as listed below:

2007 Poverty Guidelines for the 48 Contiguous States and the District of Columbia

Persons in family	Poverty guideline
1	$10,210
2	13,690
3	17,170
4	20,650
5	24,130
6	27,610
7	31,090
8	34,570

For families with more than 8 persons, add $3,480 for each additional person.

4. I hereby certify, under the pains and penalties of perjury, that I/we have not caused or contributed to the groundwater contamination resulting in the need to seek eligibility for use of the Bernard Allen Memorial Drinking Water Fund. .

Affiant further saith not.

Signature/Printed Name Date

Sworn to and subscribed before me

this _____ day of _____, 20___.

_____ Notary Public

My commission expires: _____ (SEAL)

9/04/07

October 3, 2008

MEMORANDUM

TO: Hanna Assefa, Industrial Hygienist
Superfund Section, Inactive Hazardous Site Branch (IHSB)

FROM: Sean Boyles
Fayetteville Regional Office, IHSB

RE: Health Risk Evaluation Request
William Brown Residence, 115 Fruitland Road
Hamlet, Richmond County, North Carolina

This sample was collected from a private residential supply well as part of investigation for pesticides around peach orchards. An analysis for volatile organic compounds was performed and the following constituents were detected:

Analyte	Detected Concentration	Units	2L Groundwater Standard
Trichloroethene	1.2	ug/L	2.8 ug/L

If you have any questions, please give me a call at 910.433.3345.

October 3, 2008

MEMORANDUM

TO: Hanna Assefa, Industrial Hygienist
Superfund Section, Inactive Hazardous Site Branch (IHSB)

FROM: Sean Boyles
Fayetteville Regional Office, IHSB

RE: Health Risk Evaluation Request
Anna Harrison Residence, 961 N. Hwy 177
Hamlet, Richmond County, North Carolina

This sample was collected from a private residential supply well as part of investigation for pesticides around peach orchards. An analysis for volatile organic compounds was performed and the following constituents were detected:

Analyte	Detected Concentration	Units	2L Groundwater Standard
Trichloroethene	0.12	ug/L	2.8 ug/L
Naphthalene	0.32	ug/l	21 ug/l
1,4-dichlorobenzene	0.26	ug/l	1.4 ug/l

If you have any questions, please give me a call at 910.433.3345.

Michael F. Easley, Governor

William G. Ross Jr., Secretary
North Carolina Department of Environment and Natural Resources

Coleen Sullins, Director
Division of Water Quality

September 29, 2008

To: Owner /Resident
Re: Water Sample Lab No. AB35625

Recently, it has been discovered that some water supply wells in your area contain detectable amounts of pesticides and associated chemicals that were in use more than 25 years ago when this area was primarily agricultural land.

Below, please find information related to sampling conducted on the water supply well for this residence.

[ ] Based on the sample results, your water is safe for all uses. It is recommended that the water be tested every six months to make sure it is still safe.

[ ] Based on the sample results, elevated levels of the pesticides were detected. It is recommended that the water should not be used for cooking or drinking. Also, it is recommended that showering and bathing should be limited to less than 10 minutes.

The above usage guidelines were provided by Dr. Ken Rudo, toxicologist with the North Carolina Division of Public Health. **If you have further questions about the usage recommendations, Dr. Rudo can be reached at (919) 707-5911 or through the division's main number at (919) 707-5900.**

This well was sampled by the North Carolina Division of Water Quality. Samples of water were collected and analyzed for chemicals known as volatile organics. Volatile organics are manmade chemicals and are used in many applications, including pesticides. Although the chemicals detected in some of the wells in this area are no longer being used in pesticides, they can remain in the groundwater for long periods of time.

The Division of Water Quality is committed to providing you with additional information, as may be needed. If you have questions about the investigation of this issue, you may contact Stephen Barnhardt, Aquifer Protection Section Supervisor for the Fayetteville Regional Office by calling (910) 433-3336.

Sincerely,

Stephen A. Barnhardt

NC DWQ Laboratory Section Results

County:	RICHMOND	Sample ID:	AB35625
River Basin		PO Number #	8G1282
Report To	FROAP	Date Received:	09/18/2008
Collector:	B TODD	Time Received:	08:00
Region:	FRO	Labworks LoginID	SMATHIS
Sample Matrix:	GROUNDWATER	Date Reported:	9/23/08
Loc. Type:	WATER SUPPLY	Report Generated:	09/23/2008
Emergency Yes/No	YES		
COC Yes/No	YES		

VisitID

Loc. Descr.: ANNA HARRISON

QC 9/25/08

Location ID:	6I077961NC177	Collect Date:	09/17/2008	Collect Time::	13:16	Sample Depth	

Sample Qualifiers and Comments

SEP 29 2008

Routine Qualifiers

For a more detailed description of these qualifier codes refer to www.dwqlab.org under Staff Access

A-Value reported is the average of two or more determinations
B1-Countable membranes with <20 colonies; Estimated
B2- Counts from all filters were zero.
B3- Countable membranes with more than 60 or 80 colonies; Estimated
B4-Filters have counts of both >60 or 80 and < 20; Estimated
B5-Too many colonies were present; too numerous to count (TNTC)
J2- Reported value failed to meet QC criteria for either precision or accuracy; Estimated
J3-The sample matrix interfered with the ability to make any accurate determination; Estimated
J6-The lab analysis was from an unpreserved or improperly chemically preserved sample; Estimated
N1-The component has been tentatively identified based on mass spectral library search and has an estimated value
N3-Estimated concentration is < PQL and >MDL
NE-No established PQL
P-Elevated PQL due to matrix interference and/or sample dilution
Q1-Holding time exceeded prior to receipt at lab.
Q2- Holding time exceeded following receipt by lab
PQL- Practical Quantitation Limit-subject to change due to instrument sensitivity
U- Samples analyzed for this compound but not detected
X1- Sample not analyzed for this compound

LAB

CAS #	Analyte Name	PQL	Result	Qualifier	Units	Analyst/Date	Approved By /Date
	Sample temperature at receipt by lab		1.6		°C	HPARKER	SMATHIS
	Method Reference					9/18/08	9/18/08
VOL							
	Volatile Organics In liquid		_TITLE_		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
75-78-1	Dichlorodifluoromethane	1.0	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
74-87-3	Chloromethane	0.50	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
75-01-4	Vinyl Chloride	0.50	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
74-83-9	Bromomethane	0.50	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
75-00-3	Chloroethane	0.50	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
75-69-4	Trichlorofluoromethane	0.50	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
75-35-4	1,1-Dichloroethene	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
75-09-2	Methylene Chloride	10	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
156-60-5	trans-1,2-Dichloroethene	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
1634-04-4	Methyl Tert-Butyl Ether	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
75-34-3	1,1-Dichloroethane	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
156-59-4	cis-1,2-Dichloroethene	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
74-97-5	Bromochloromethane	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
67-66-3	Chloroform	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
590-20-7	2,2-Dichloropropane	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
107-06-2	1,2-Dichloroethane	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08

NC DWQ Laboratory Section Results

Location ID: 6I077961NC177
Loc. Descr.: ANNA HARRISON
Visit ID

Sample ID: AB35625
Collect Date: 09/17/2008
Collect Time:: 13:16

CAS #	Analyte Name	PQL	Result	Qualifier	Units	Analyst/Date	Approved By /Date
71-55-6	1,1,1-Trichloroethane	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
563-58-6	1,1-Dichloropropene	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
56-23-5	Carbon Tetrachloride	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
71-43-2	Benzene	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
74-95-3	Dibromomethane	1.0	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
78-87-5	1,2-Dichloropropane	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
79-01-6	Trichloroethene	0.25	0.12	N3	ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
75-27-4	Bromodichloromethane	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
10061-01-5	cis-1,3-Dichloropropene	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
10061-02-6	trans-1,3-Dichloropropene	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
79-00-5	1,1,2-Trichloroethane	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
108-88-3	Toluene	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
142-28-9	1,3-Dichloropropane	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
124-48-1	Dibromochloromethane	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
106-93-4	(EDB)1,2-Dibromoethane	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
127-18-4	Tetrachloroethene	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
108-90-7	Chlorobenzene	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
100-41-4	Ethylbenzene	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08

NC DWQ Laboratory Section Results

Location ID: 6I077961NC177
Loc. Descr.: ANNA HARRISON
Visit ID

Sample ID: AB35625
Collect Date: 09/17/2008
Collect Time:: 13:16

CAS #	Analyte Name	PQL	Result	Qualifier	Units	Analyst/Date	Approved By /Date
75-25-2	Bromoform	1.0	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
108-38-3	m,p-Xylene	0.50	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
100-42-5	Styrene	0.25	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
79-34-5	1,1,2,2-Tetrachloroethane	0.25	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
630-20-6	1,1,1,2-Tetrachloroethane	0.25	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
95-47-6	o-Xylene	0.25	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
96-18-4	1,2,3-Trichloropropane	0.25	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
98-82-8	Isopropylbenzene	0.25	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
108-86-1	Bromobenzene	0.25	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
103-65-1	n-Propylbenzene	0.25	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
95-49-8	2-Chlorotoluene	0.25	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
106-43-4	4-Chlorotoluene	0.25	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
108-67-8	1,3,5-Trimethylbenzene	0.25	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
98-06-6	tert-Butylbenzene	0.25	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
95-63-6	1,2,4-Trimethylbenzene	0.25	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
135-98-8	sec-Butylbenzene	0.25	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
543-73-1	m-Dichlorobenzene (1,3)	0.25	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
106-46-7	p-Dichlorobenzene (1,4)	0.25	0.26		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						

NC DWQ Laboratory Section Results

Location ID: 6I077961NC177
Loc. Descr.: ANNA HARRISON
Visit ID

Sample ID: AB35625
Collect Date: 09/17/2008
Collect Time:: 13:16

CAS #	Analyte Name	PQL	Result	Qualifier	Units	Analyst/Date	Approved By /Date
95-50-1	o-Dichlorobenzene (1,2)	0.25	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
99-87-6	p-Isopropyltoluene	0.25	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
104-51-8	n-Butylbenzene	0.25	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
120-82-1	1,2,4-Trichlorobenzene	0.50	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
91-20-3	Naphthalene	0.50	0.32	N3	ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
87-68-3	Hexachlorobutadiene	0.50	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
87-61-6	1,2,3-Trichlorobenzene	1.0	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						

GROUNDWATER FIELD/LAB FORM

861282

North Carolina
Department of Environment and Natural Resources
DIVISION OF WATER QUALITY-GROUNDWATER SECTION

Location code [redacted]61077961 NC 177

County Richmond

Quad No _____ Serial No. _____

Lat. _____ Long. _____

SAMPLE TYPE: ☑ Water ☐ Soil ☐ Other ☑ Chain of Custody

SAMPLE PRIORITY: ☐ Routine ☑ Emergency

961 NC 177

Lab Number AB35625

Date Received 9/18/08 Time: 0800

Rec'd By: HP From: Bus, (Courier), Hand Del., Other: _____

Data Entry By: _____ Ck: _____

Date Reported: _____

Report To: ARO, (FRO), MRO, RRO, WaRO, WiRO, WSRO, Kinston FO, Fed. Trust, Central Off., Other: _____

Shipped by: Bus, (Courier), Hand Del., Other: _____

Collector(s): BillTodd

Purpose: Date 09/17/08 Time 1:16 Baseline, (Complaint) Compliance, LUST, Pesticide Study, Federal Trust, Other: _____ (circle one)

FIELD ANALYSES

pH 400 _____ Spec. Cond. 94 _____ at 25°C

Temp. 10 _____ °C Odor _____

Appearance _____

Field Analysis By: BillTodd

Owner Anna Harrison

Location or Site 961 N Hwy 177

Description of sampling point outside tap

Sampling Method pump (Pump: bailer, etc.) Sample Interval _____

Remarks control # 124 (Pumping time, air temp., etc.)

LABORATORY ANALYSES

	BOD 310	mg/L
	COD High 340	mg/L
	COD Low 335	mg/L
	Coliform: MF Fecal 31616	/100ml
	Coliform: MF Total 31504	/100ml
	TOC 680	mg/L
	Turbidity 76	NTU
	Residue, Suspended 530	mg/L
	pH 403	units
	Alkalinity to pH 4.5 410	mg/L
	Alkalinity to pH 8.3 415	mg/L
	Carbonate 445	mg/L
	Bicarbonate 440	mg/L
	Carbon dioxide 405	mg/L
	Chloride 940	mg/L
	Chromium: Hex 1032	ug/L
	Color: True 80	CU
	Cyanide 720	mg/L

	Diss. Solids 70300	mg/L
	Fluoride 951	mg/L
	Hardness: Total 900	mg/L
	Hardness (non-carb) 902	mg/L
	Phenols 32730	ug/l
	Specific Cond. 95	uMhos/cm
	Sulfate 945	mg/L
	Sulfide 745	mg/L
	Oil and Grease	mg/L
	NH_3 as N 610	mg/L
	TKN as N 625	mg/L
	$NO_2 + NO_3$ as N 630	mg/L
	P: Total as P 665	mg/L
	Nitrate (NO_3 as N) 620	mg/L
	Nitrite (NO_2 as N) 615	mg/L

	Ag-Silver 46566	ug/L
	Al-Aluminum 46557	ug/L
	As-Arsenic 46551	ug/L
	Ba-Barium 46558	ug/L
	Ca-Calcium 46552	mg/L
	Cd-Cadmium 46559	ug/L
	Cr-Chromium 46559	ug/L
	Cu-Copper 46562	ug/L
	Fe-Iron 46563	ug/L
	Hg-Mercury 71900	ug/L
	K-Potassium 46555	mg/L
	Mg-Magnesium 46554	mg/L
	Mn-Manganese 46565	ug/L
	Na-Sodium 46556	mg/L
	Ni-Nickel	ug/L
	Pb-Lead 46564	ug/L
	Se-Selenium	ug/L
	Zn-Zinc 46567	ug/L

	Organochlorine Pesticides
	Organophosphorus Pesticides
	Nitrogen Pesticides
	Acid Herbicides
	PCBs
	Semivolatile Organics
	TPH-Diesel Range
X	Volatile Organics (VOA bottle) V
	TPH-Gasoline Range
	TPH-BTEX Gasoline Range

LAB USE ONLY
Temperature on arrival (°C): 1.6

Lab Comments _____

GW-54 REV. 7/03 For Dissolved Analysis-submit filtered sample and write "DIS" in block.

SEAN BOYLES
/HS/DWM

Michael F. Easley, Governor

William G. Ross Jr., Secretary
North Carolina Department of Environment and Natural Resources

Coleen Sullins, Director
Division of Water Quality

October 27, 2008

To: Owner /Resident
Re: Water Sample Lab No. AB36357

Recently, it has been discovered that some water supply wells in your area contain detectable amounts of pesticides and associated chemicals that were in use more than 25 years ago when this area was primarily agricultural land.

Below, please find information related to sampling conducted on the water supply well for this residence.

[✓] Based on the sample results, your water is safe for all uses. It is recommended that the water be tested every six months to make sure it is still safe.

[ ] Based on the sample results, elevated levels of the pesticides were detected. It is recommended that the water should not be used for cooking or drinking. Also, it is recommended that showering and bathing should be limited to less than 10 minutes.

The above usage guidelines were provided by Dr. Ken Rudo, toxicologist with the North Carolina Division of Public Health. **If you have further questions about the usage recommendations, Dr. Rudo can be reached at (919) 707-5911 or through the division's main number at (919) 707-5900.**

This well was sampled by the North Carolina Division of Water Quality. Samples of water were collected and analyzed for chemicals known as volatile organics. Volatile organics are manmade chemicals and are used in many applications, including pesticides. Although the chemicals detected in some of the wells in this area are no longer being used in pesticides, they can remain in the groundwater for long periods of time.

The Division of Water Quality is committed to providing you with additional information, as may be needed. If you have questions about the investigation of this issue, you may contact Stephen Barnhardt, Aquifer Protection Section Supervisor for the Fayetteville Regional Office by calling (910) 433-3336.

Sincerely,

JIM BARBER

FOR Stephen A. Barnhardt

NC DWQ Laboratory Section Results

County: RICHMOND
River Basin
Report To FROAP
Collector: B TODD
Region: FRO
Sample Matrix: GROUNDWATER
Loc. Type: WATER SUPPLY
Emergency Yes/No YES
COC Yes/No YES

RECEIVED
OCT 27 2008
DENR-FAYETTEVILLE REGIONAL OFFICE

VisitID

DIVISION OF WATER QUALITY DWQ

Sample ID: AB36357
PO Number # 8G1388
Date Received: 10/08/2008
Time Received: 07:45
Labworks LoginID SMATHIS
Date Reported: 10/10/08
Report Generated: 10/23/2008

QC 10/24/08

Loc. Descr.: HERMAN RUSSELL

Location ID: 6I077127FLR	Collect Date: 10/07/2008	Collect Time:: 16:00	Sample Depth

Sample Qualifiers and Comments

?

Routine Qualifiers

For a more detailed description of these qualifier codes refer to www.dwqlab.org under Staff Access

A-Value reported is the average of two or more determinations
B1-Countable membranes with <20 colonies; Estimated
B2- Counts from all filters were zero.
B3- Countable membranes with more than 60 or 80 colonies; Estimated
B4-Filters have counts of both >60 or 80 and < 20; Estimated
B5-Too many colonies were present; too numerous to count (TNTC)
J2- Reported value failed to meet QC criteria for either precision or accuracy; Estimated
J3-The sample matrix interfered with the ability to make any accurate determination; Estimated
J6-The lab analysis was from an unpreserved or improperly chemically preserved sample; Estimated
N1-The component has been tentatively identified based on mass spectral library search and has an estimated value
N3-Estimated concentration is < PQL and >MDL
NE-No established PQL
P-Elevated PQL due to matrix interference and/or sample dilution
Q1-Holding time exceeded prior to receipt at lab.
Q2- Holding time exceeded following receipt by lab
PQL- Practical Quantitation Limit-subject to change due to instrument sensitivity
U- Samples analyzed for this compound but not detected
X1- Sample not analyzed for this compound

I AR

NC DWQ Laboratory Section Results

Location ID: 6I077127FLR
Loc. Descr.: HERMAN RUSSELL
Visit ID

Sample ID: AB36357
Collect Date: 10/07/2008
Collect Time:: 16:00

CAS #	Analyte Name	PQL	Result	Qualifier	Units	Analyst/Date	Approved By /Date
LAB							
	Sample temperature at receipt by lab		1.9		°C	DSAUNDERS	SMATHIS
	Method Reference					10/8/08	10/8/08
VOL							
	Volatile Organics in liquid		_TITLE_		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					10/9/08	10/10/08
75-78-1	Dichlorodifluoromethane	1.0	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					10/9/08	10/10/08
74-87-3	Chloromethane	0.50	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					10/9/08	10/10/08
75-01-4	Vinyl Chloride	0.50	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					10/9/08	10/10/08
74-83-9	Bromomethane	0.50	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					10/9/08	10/10/08
75-00-3	Chloroethane	0.50	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					10/9/08	10/10/08
75-69-4	Trichlorofluoromethane	0.50	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					10/9/08	10/10/08
75-35-4	1,1-Dichloroethene	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					10/9/08	10/10/08
75-09-2	Methylene Chloride	10	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					10/9/08	10/10/08
156-60-5	trans-1,2-Dichloroethene	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					10/9/08	10/10/08
1634-04-4	Methyl Tert-Butyl Ether	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					10/9/08	10/10/08
75-34-3	1,1-Dichloroethane	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					10/9/08	10/10/08
156-59-4	cis-1,2-Dichloroethene	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					10/9/08	10/10/08
74-97-5	Bromochloromethane	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					10/9/08	10/10/08
67-66-3	Chloroform	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					10/9/08	10/10/08
590-20-7	2,2-Dichloropropane	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					10/9/08	10/10/08

NC DWQ Laboratory Section Results

Location ID: 6I077127FLR
Loc. Descr.: HERMAN RUSSELL
Visit ID

Sample ID: AB36357
Collect Date: 10/07/2008
Collect Time:: 16:00

CAS #	Analyte Name	PQL	Result	Qualifier	Units	Analyst/Date	Approved By /Date
107-06-2	1,2-Dichloroethane	0.25	Not detected		ug/L	VANDREWS 10/9/08	RKELLING 10/10/08
	Method Reference EPA5030/624/8260						
71-55-6	1,1,1-Trichloroethane	0.25	Not detected		ug/L	VANDREWS 10/9/08	RKELLING 10/10/08
	Method Reference EPA5030/624/8260						
563-58-6	1,1-Dichloropropene	0.25	Not detected		ug/L	VANDREWS 10/9/08	RKELLING 10/10/08
	Method Reference EPA5030/624/8260						
56-23-5	Carbon Tetrachloride	0.25	Not detected		ug/L	VANDREWS 10/9/08	RKELLING 10/10/08
	Method Reference EPA5030/624/8260						
71-43-2	Benzene	0.25	Not detected		ug/L	VANDREWS 10/9/08	RKELLING 10/10/08
	Method Reference EPA5030/624/8260						
74-95-3	Dibromomethane	1.0	Not detected		ug/L	VANDREWS 10/9/08	RKELLING 10/10/08
	Method Reference EPA5030/624/8260						
78-87-5	1,2-Dichloropropane	0.25	Not detected		ug/L	VANDREWS 10/9/08	RKELLING 10/10/08
	Method Reference EPA5030/624/8260						
79-01-6	Trichloroethene	0.25	0.30		ug/L	VANDREWS 10/9/08	RKELLING 10/10/08
	Method Reference EPA5030/624/8260						
75-27-4	Bromodichloromethane	0.25	Not detected		ug/L	VANDREWS 10/9/08	RKELLING 10/10/08
	Method Reference EPA5030/624/8260						
10061-01-5	cis-1,3-Dichloropropene	0.25	Not detected		ug/L	VANDREWS 10/9/08	RKELLING 10/10/08
	Method Reference EPA5030/624/8260						
10061-02-6	trans-1,3-Dichloropropene	0.25	Not detected		ug/L	VANDREWS 10/9/08	RKELLING 10/10/08
	Method Reference EPA5030/624/8260						
79-00-5	1,1,2-Trichloroethane	0.25	Not detected		ug/L	VANDREWS 10/9/08	RKELLING 10/10/08
	Method Reference EPA5030/624/8260						
108-88-3	Toluene	0.25	Not detected		ug/L	VANDREWS 10/9/08	RKELLING 10/10/08
	Method Reference EPA5030/624/8260						
142-28-9	1,3-Dichloropropane	0.25	Not detected		ug/L	VANDREWS 10/9/08	RKELLING 10/10/08
	Method Reference EPA5030/624/8260						
124-48-1	Dibromochloromethane	0.25	Not detected		ug/L	VANDREWS 10/9/08	RKELLING 10/10/08
	Method Reference EPA5030/624/8260						
106-93-4	(EDB)1,2-Dibromoethane	0.25	Not detected		ug/L	VANDREWS 10/9/08	RKELLING 10/10/08
	Method Reference EPA5030/624/8260						
127-18-4	Tetrachloroethene	0.25	Not detected		ug/L	VANDREWS 10/9/08	RKELLING 10/10/08
	Method Reference EPA5030/624/8260						
108-90-7	Chlorobenzene	0.25	Not detected		ug/L	VANDREWS 10/9/08	RKELLING 10/10/08
	Method Reference EPA5030/624/8260						

NC DWQ Laboratory Section Results

Location ID: 6I077127FLR
Loc. Descr.: HERMAN RUSSELL
Visit ID

Sample ID: AB36357
Collect Date: 10/07/2008
Collect Time:: 16:00

CAS #	Analyte Name	PQL	Result	Qualifier	Units	Analyst/Date	Approved By /Date
100-41-4	Ethylbenzene	0.25	Not detected		ug/L	VANDREWS 10/9/08	RKELLING 10/10/08
	Method Reference EPA5030/624/8260						
75-25-2	Bromoform	1.0	Not detected		ug/L	VANDREWS 10/9/08	RKELLING 10/10/08
	Method Reference EPA5030/624/8260						
108-38-3	m,p-Xylene	0.50	Not detected		ug/L	VANDREWS 10/9/08	RKELLING 10/10/08
	Method Reference EPA5030/624/8260						
100-42-5	Styrene	0.25	Not detected		ug/L	VANDREWS 10/9/08	RKELLING 10/10/08
	Method Reference EPA5030/624/8260						
79-34-5	1,1,2,2-Tetrachloroethane	0.25	Not detected		ug/L	VANDREWS 10/9/08	RKELLING 10/10/08
	Method Reference EPA5030/624/8260						
630-20-6	1,1,1,2-Tetrachloroethane	0.25	Not detected		ug/L	VANDREWS 10/9/08	RKELLING 10/10/08
	Method Reference EPA5030/624/8260						
95-47-6	o-Xylene	0.25	Not detected		ug/L	VANDREWS 10/9/08	RKELLING 10/10/08
	Method Reference EPA5030/624/8260						
96-18-4	1,2,3-Trichloropropane	0.25	Not detected		ug/L	VANDREWS 10/9/08	RKELLING 10/10/08
	Method Reference EPA5030/624/8260						
98-82-8	Isopropylbenzene	0.25	Not detected		ug/L	VANDREWS 10/9/08	RKELLING 10/10/08
	Method Reference EPA5030/624/8260						
108-86-1	Bromobenzene	0.25	Not detected		ug/L	VANDREWS 10/9/08	RKELLING 10/10/08
	Method Reference EPA5030/624/8260						
103-65-1	n-Propylbenzene	0.25	Not detected		ug/L	VANDREWS 10/9/08	RKELLING 10/10/08
	Method Reference EPA5030/624/8260						
95-49-8	2-Chlorotoluene	0.25	Not detected		ug/L	VANDREWS 10/9/08	RKELLING 10/10/08
	Method Reference EPA5030/624/8260						
106-43-4	4-Chlorotoluene	0.25	Not detected		ug/L	VANDREWS 10/9/08	RKELLING 10/10/08
	Method Reference EPA5030/624/8260						
108-67-8	1,3,5-Trimethylbenzene	0.25	Not detected		ug/L	VANDREWS 10/9/08	RKELLING 10/10/08
	Method Reference EPA5030/624/8260						
98-06-6	tert-Butylbenzene	0.25	Not detected		ug/L	VANDREWS 10/9/08	RKELLING 10/10/08
	Method Reference EPA5030/624/8260						
95-63-6	1,2,4-Trimethylbenzene	0.25	Not detected		ug/L	VANDREWS 10/9/08	RKELLING 10/10/08
	Method Reference EPA5030/624/8260						
135-98-8	sec-Butylbenzene	0.25	Not detected		ug/L	VANDREWS 10/9/08	RKELLING 10/10/08
	Method Reference EPA5030/624/8260						
543-73-1	m-Dichlorobenzene (1,3)	0.25	Not detected		ug/L	VANDREWS 10/9/08	RKELLING 10/10/08
	Method Reference EPA5030/624/8260						

Location ID: 6I077127FLR
Loc. Descr.: HERMAN RUSSELL
Visit ID

NC DWQ Laboratory Section Results

Sample ID: AB36357
Collect Date: 10/07/2008
Collect Time:: 16:00

CAS #	Analyte Name	PQL	Result	Qualifier	Units	Analyst/Date	Approved By /Date
106-46-7	p-Dichlorobenzene (1,4)	0.25	Not detected		ug/L	VANDREWS 10/9/08	RKELLING 10/10/08
	Method Reference EPA5030/624/8260						
95-50-1	o-Dichlorobenzene (1,2)	0.25	Not detected		ug/L	VANDREWS 10/9/08	RKELLING 10/10/08
	Method Reference EPA5030/624/8260						
99-87-6	p-Isopropyltoluene	0.25	Not detected		ug/L	VANDREWS 10/9/08	RKELLING 10/10/08
	Method Reference EPA5030/624/8260						
104-51-8	n-Butylbenzene	0.25	Not detected		ug/L	VANDREWS 10/9/08	RKELLING 10/10/08
	Method Reference EPA5030/624/8260						
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	Not detected		ug/L	VANDREWS 10/9/08	RKELLING 10/10/08
	Method Reference EPA5030/624/8260						
120-82-1	1,2,4-Trichlorobenzene	0.50	Not detected		ug/L	VANDREWS 10/9/08	RKELLING 10/10/08
	Method Reference EPA5030/624/8260						
91-20-3	Naphthalene	0.50	Not detected		ug/L	VANDREWS 10/9/08	RKELLING 10/10/08
	Method Reference EPA5030/624/8260						
87-68-3	Hexachlorobutadiene	0.50	Not detected		ug/L	VANDREWS 10/9/08	RKELLING 10/10/08
	Method Reference EPA5030/624/8260						
87-61-6	1,2,3-Trichlorobenzene	1.0	Not detected		ug/L	VANDREWS 10/9/08	RKELLING 10/10/08
	Method Reference EPA5030/624/8260						

GROUNDWATER FIELD/LAB FORM

COC

North Carolina
Department of Environment and Natural Resources
DIVISION OF WATER QUALITY-GROUNDWATER SECTION

Location code [redacted]6I077127FLR

SAMPLE TYPE: ☑ Water ☐ Soil ☐ Other ☑ Chain of Custody

SAMPLE PRIORITY: ☐ Routine ☑ Emergency

127FLR 8G1388

Lab Number AB36357

County Richmond

Quad No _____ Serial No. _____

Lat. _____ Long. _____

Date Received 10-8-08 Time: 0745

Rec'd By: _____ From: Bus, (Courier), Hand Del.,

Other: FP

Data Entry By: _____ Ck: _____

Date Reported: _____

Report To: ARO, (FRO), MRO, RRO, WaRO, WiRO, WSRO, Kinston FO, Fed. Trust, Central Off., Other: _____

Shipped by: Bus, (Courier), Hand Del., Other: _____

Collector(s): BillTodd _____ Date 10/7/08 Time 4:00 Purpose: Baseline, (Complaint), Compliance, LUST, Pesticide Study, Federal Trust, Other: _____ (circle one)

FIELD ANALYSES

pH 400 _____ Spec. Cond. 94 _____ at 25°C

Temp. 10 _____ °C Odor _____

Appearance _____

Field Analysis By: BillTodd _____

Owner Herman Russell

Location or Site 127 Fruitland Rd

Description of sampling point outside tap

Sampling Method pump (Pump, bailer, etc.) Sample Interval _____

Remarks _____ (Pumping time, air temp., etc.)

LABORATORY ANALYSES

	BOD 310	mg/L
	COD High 340	mg/L
	COD Low 335	mg/L
	Coliform: MF Fecal 31616	/100ml
	Coliform: MF Total 31504	/100ml
	TOC 680	mg/L
	Turbidity 76	NTU
	Residue, Suspended 530	mg/L
	pH 403	units
	Alkalinity to pH 4.5 410	mg/L
	Alkalinity to pH 8.3 415	mg/L
	Carbonate 445	mg/L
	Bicarbonate 440	mg/L
	Carbon dioxide 405	mg/L
	Chloride 940	mg/L
	Chromium: Hex 1032	ug/L
	Color: True 80	CU
	Cyanide 720	mg/L

	Diss. Solids 70300	mg/L
	Fluoride 951	mg/L
	Hardness: Total 900	mg/L
	Hardness (non-carb) 902	mg/L
	Phenols 32730	ug/l
	Specific Cond. 95	uMhos/cm
	Sulfate 945	mg/L
	Sulfide 745	mg/L
	Oil and Grease	mg/L
	NH_3 as N 610	mg/L
	TKN as N 625	mg/L
	$NO_2 + NO_3$ as N 630	mg/L
	P: Total as P 665	mg/L
	Nitrate (NO_3 as N) 620	mg/L
	Nitrite (NO_2 as N) 615	mg/L

	Ag-Silver 46566	ug/L
	Al-Aluminum 46557	ug/L
	As-Arsenic 46551	ug/L
	Ba-Barium 46558	ug/L
	Ca-Calcium 46552	mg/L
	Cd-Cadmium 46559	ug/L
	Cr-Chromium 46559	ug/L
	Cu-Copper 46562	ug/L
	Fe-Iron 46563	ug/L
	Hg-Mercury 71900	ug/L
	K-Potassium 46555	mg/L
	Mg-Magnesium 46554	mg/L
	Mn-Manganese 46565	ug/L
	Na-Sodium 46556	mg/L
	Ni-Nickel	ug/L
	Pb-Lead 46564	ug/L
	Se-Selenium	ug/L
	Zn-Zinc 46567	ug/L

	Organochlorine Pesticides
	Organophosphorus Pesticides
	Nitrogen Pesticides
	Acid Herbicides
	PCBs
	Semivolatile Organics
	TPH-Diesel Range
X	Volatile Organics (VOA bottle)
	TPH-Gasoline Range
	TPH-BTEX Gasoline Range

LAB USE ONLY
Temperature on arrival (°C): 1.9

Lab Comments _____

GW-54 REV 7/03 For Dissolved Analysis-submit filtered sample and write "DIS" in block.

Michael F. Easley, Governor

William G. Ross Jr., Secretary
North Carolina Department of Environment and Natural Resources

Coleen Sullins, Director
Division of Water Quality

September 8, 2008 LAT. 34.930641085

To: Owner /Resident LONG -79.638485490
Re: Water Sample Lab No. AB34912

As requested your well water was sampled and analyzed.

Below, please find information related to sampling conducted on the water supply well for this residence.

[ ] Based on the sample results, your water is safe for all uses. It is recommended that the water be tested every six months to make sure it is still safe.

[X] Based on the sample results, elevated level of solvent was detected. It is recommended that the water should not be used for cooking or drinking. Also, it is recommended that showering and bathing should be limited to less than 10 minutes.

The above usage guidelines were provided by Dr. Ken Rudo, toxicologist with the North Carolina Division of Public Health. **If you have further questions about the usage recommendations, Dr. Rudo can be reached at (919) 707-5911 or through the division's main number at (919) 707-5900.**

This well was sampled by the North Carolina Division of Water Quality. Samples of water were collected and analyzed for chemicals known as volatile organics. Volatile organics are manmade chemicals and are used in many applications.

DENR is committed to providing you with additional information, as may be needed. If you have questions about the investigation of this issue, you may contact Sean Boyles, Division of Waste Management, Fayetteville Regional Office by calling (910) 433-3345.

Sincerely,

DWM
1HS

Michael F. Easley, Governor

William G. Ross Jr., Secretary
North Carolina Department of Environment and Natural Resources

Coleen Sullins, Director
Division of Water Quality

September 29, 2008

To: Owner /Resident
Re: Water Sample Lab No. AB35629

Recently, it has been discovered that some water supply wells in your area contain detectable amounts of pesticides and associated chemicals that were in use more than 25 years ago when this area was primarily agricultural land.

Below, please find information related to sampling conducted on the water supply well for this residence.

[✓] Based on the sample results, your water is safe for all uses. It is recommended that the water be tested every six months to make sure it is still safe.

[ ] Based on the sample results, elevated levels of the pesticides were detected. It is recommended that the water should not be used for cooking or drinking. Also, it is recommended that showering and bathing should be limited to less than 10 minutes.

The above usage guidelines were provided by Dr. Ken Rudo, toxicologist with the North Carolina Division of Public Health. **If you have further questions about the usage recommendations, Dr. Rudo can be reached at (919) 707-5911 or through the division's main number at (919) 707-5900.**

This well was sampled by the North Carolina Division of Water Quality. Samples of water were collected and analyzed for chemicals known as volatile organics. Volatile organics are manmade chemicals and are used in many applications, including pesticides. Although the chemicals detected in some of the wells in this area are no longer being used in pesticides, they can remain in the groundwater for long periods of time.

The Division of Water Quality is committed to providing you with additional information, as may be needed. If you have questions about the investigation of this issue, you may contact Stephen Barnhardt, Aquifer Protection Section Supervisor for the Fayetteville Regional Office by calling (910) 433-3336.

Sincerely,

Jim Barbee

FOR Stephen A. Barnhardt

NC DWQ Laboratory Section Results

County: RICHMOND
River Basin
Report To FROAP
Collector: B TODD
Region: FRO
Sample Matrix: GROUNDWATER
Loc. Type: WATER SUPPLY
Emergency Yes/No YES
COC Yes/No YES

VisitID

Loc. Descr.: WILLIAM BROWN

Sample ID: AB35629
PO Number # 8G1286
Date Received: 09/18/2008
Time Received: 08:00
Labworks LoginID SMATHIS
Date Reported: 9/23/08

Report Generated: 09/23/2008

QC 9/25/08

Location ID: 6I077115FR	Collect Date: 09/17/2008	Collect Time:: 13:04	Sample Depth

Sample Qualifiers and Comments

SEP 25 2008

Routine Qualifiers

For a more detailed description of these qualifier codes refer to www.dwqlab.org under Staff Access

A-Value reported is the average of two or more determinations
B1-Countable membranes with <20 colonies; Estimated
B2- Counts from all filters were zero.
B3- Countable membranes with more than 60 or 80 colonies; Estimated
B4-Filters have counts of both >60 or 80 and < 20; Estimated
B5-Too many colonies were present; too numerous to count (TNTC)
J2- Reported value failed to meet QC criteria for either precision or accuracy; Estimated
J3-The sample matrix interfered with the ability to make any accurate determination; Estimated
J6-The lab analysis was from an unpreserved or improperly chemically preserved sample; Estimated
N1-The component has been tentatively identified based on mass spectral library search and has an estimated value
N3-Estimated concentration is < PQL and >MDL
NE-No established PQL
P-Elevated PQL due to matrix interference and/or sample dilution
Q1-Holding time exceeded prior to receipt at lab.
Q2- Holding time exceeded following receipt by lab
PQL- Practical Quantitation Limit-subject to change due to instrument sensitivity
U- Samples analyzed for this compound but not detected
X1- Sample not analyzed for this compound

LAB

NC DWQ Laboratory Section Results

Location ID: 6I077115FR
Loc. Descr.: WILLIAM BROWN
Visit ID

Sample ID: AB35629
Collect Date: 09/17/2008
Collect Time:: 13:04

CAS #	Analyte Name	PQL	Result	Qualifier	Units	Analyst/Date	Approved By /Date
	Sample temperature at receipt by lab		1.6		°C	HPARKER	SMATHIS
	Method Reference					9/18/08	9/18/08
VOL							
	Volatile Organics in liquid		_TITLE_		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
75-78-1	Dichlorodifluoromethane	1.0	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
74-87-3	Chloromethane	0.50	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
75-01-4	Vinyl Chloride	0.50	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
74-83-9	Bromomethane	0.50	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
75-00-3	Chloroethane	0.50	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
75-69-4	Trichlorofluoromethane	0.50	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
75-35-4	1,1-Dichloroethene	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
75-09-2	Methylene Chloride	10	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
156-60-5	trans-1,2-Dichloroethene	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
1634-04-4	Methyl Tert-Butyl Ether	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
75-34-3	1,1-Dichloroethane	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
156-59-4	cis-1,2-Dichloroethene	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
74-97-5	Bromochloromethane	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
67-66-3	Chloroform	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
590-20-7	2,2-Dichloropropane	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
107-06-2	1,2-Dichloroethane	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08

NC DWQ Laboratory Section Results

Location ID: 6I077115FR
Loc. Descr.: WILLIAM BROWN
Visit ID

Sample ID: AB35629
Collect Date: 09/17/2008
Collect Time:: 13:04

CAS #	Analyte Name	PQL	Result	Qualifier	Units	Analyst/Date	Approved By /Date
71-55-6	1,1,1-Trichloroethane	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
563-58-6	1,1-Dichloropropene	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
56-23-5	Carbon Tetrachloride	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
71-43-2	Benzene	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
74-95-3	Dibromomethane	1.0	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
78-87-5	1,2-Dichloropropane	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
79-01-6	Trichloroethene	0.25	1.2		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
75-27-4	Bromodichloromethane	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
10061-01-5	cis-1,3-Dichloropropene	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
10061-02-6	trans-1,3-Dichloropropene	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
79-00-5	1,1,2-Trichloroethane	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
108-88-3	Toluene	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
142-28-9	1,3-Dichloropropane	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
124-48-1	Dibromochloromethane	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
106-93-4	(EDB)1,2-Dibromoethane	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
127-18-4	Tetrachloroethene	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
108-90-7	Chlorobenzene	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
100-41-4	Ethylbenzene	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08

NC DWQ Laboratory Section Results

Location ID: 6I077115FR
Loc. Descr.: WILLIAM BROWN
Visit ID

Sample ID: AB35629
Collect Date: 09/17/2008
Collect Time:: 13:04

CAS #	Analyte Name	PQL	Result	Qualifier	Units	Analyst/Date	Approved By /Date
75-25-2	Bromoform	1.0	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
108-38-3	m,p-Xylene	0.50	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
100-42-5	Styrene	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
79-34-5	1,1,2,2-Tetrachloroethane	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
630-20-6	1,1,1,2-Tetrachloroethane	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
95-47-6	o-Xylene	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
96-18-4	1,2,3-Trichloropropane	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
98-82-8	Isopropylbenzene	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
108-86-1	Bromobenzene	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
103-65-1	n-Propylbenzene	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
95-49-8	2-Chlorotoluene	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
106-43-4	4-Chlorotoluene	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
108-67-8	1,3,5-Trimethylbenzene	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
98-06-6	tert-Butylbenzene	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
95-63-6	1,2,4-Trimethylbenzene	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
135-98-8	sec-Butylbenzene	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
543-73-1	m-Dichlorobenzene (1,3)	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
106-46-7	p-Dichlorobenzene (1,4)	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08

NC DWQ Laboratory Section Results

Location ID: 6I077115FR
Loc. Descr.: WILLIAM BROWN
Visit ID

Sample ID: AB35629
Collect Date: 09/17/2008
Collect Time:: 13:04

CAS #	Analyte Name	PQL	Result	Qualifier	Units	Analyst/Date	Approved By /Date
95-50-1	o-Dichlorobenzene (1,2)	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
99-87-6	p-Isopropyltoluene	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
104-51-8	n-Butylbenzene	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
120-82-1	1,2,4-Trichlorobenzene	0.50	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
91-20-3	Naphthalene	0.50	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
87-68-3	Hexachlorobutadiene	0.50	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
87-61-6	1,2,3-Trichlorobenzene	1.0	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08

8G1286

GROUNDWATER FIELD/LAB FORM

North Carolina
Department of Environment and Natural Resources
DIVISION OF WATER QUALITY-GROUNDWATER SECTION

Location code [redacted]61077115 FR

County Richmond

Quad No _____ Serial No. _____

Lat. _____ Long. _____

SAMPLE TYPE: ☑ Water ☐ Soil ☐ Other ☑ Chain of Custody

SAMPLE PRIORITY: ☐ Routine ☑ Emergency

115FR

Lab Number AB35629

Date Received 9/18/08 Time: 0800

Rec'd By: HP From: Bus, Courier, Hand Del., Other: _____

Data Entry By: _____ Ck: _____

Date Reported: _____

Report To: ARO, FRO, MRO, RRO, WaRO, WiRO, WSRO, Kinston FO, Fed. Trust, Central Off., Other: _____

Shipped by: Bus, Courier, Hand Del., Other: _____

Collector(s): BillTodd _____ Date 09/17/08 Time 1:04 Purpose: Baseline, Complaint, Compliance, LUST, Pesticide Study, Federal Trust, Other: _____ (circle one)

FIELD ANALYSES

pH 400 _____ Spec. Cond. 94 _____ at 25°C

Temp. 10 _____ °C Odor _____

Appearance _____

Field Analysis By: BillTodd _____

Owner William Brown

Location or Site 115 Fruitland Road

Description of sampling point outside tap

Sampling Method pump (Pump, bailer, etc.) Sample Interval _____

Remarks control # 131 (Pumping time, air temp., etc.)

LABORATORY ANALYSES

	BOD 310	mg/L
	COD High 340	mg/L
	COD Low 335	mg/L
	Coliform: MF Fecal 31616	/100ml
	Coliform: MF Total 31504	/100ml
	TOC 680	mg/L
	Turbidity 76	NTU
	Residue, Suspended 530	mg/L
	pH 403	units
	Alkalinity to pH 4 5 410	mg/L
	Alkalinity to pH 8.3 415	mg/L
	Carbonate 445	mg/L
	Bicarbonate 440	mg/L
	Carbon dioxide 405	mg/L
	Chloride 940	mg/L
	Chromium: Hex 1032	ug/L
	Color: True 80	CU
	Cyanide 720	mg/L

	Diss. Solids 70300	mg/L
	Fluoride 951	mg/L
	Hardness: Total 900	mg/L
	Hardness (non-carb) 902	mg/L
	Phenols 32730	ug/l
	Specific Cond. 95	uMhos/cm
	Sulfate 945	mg/L
	Sulfide 745	mg/L
	Oil and Grease	mg/L
	NH_3 as N 610	mg/L
	TKN as N 625	mg/L
	$NO_2 + NO_3$ as N 630	mg/L
	P: Total as P 665	mg/L
	Nitrate (NO_3 as N) 620	mg/L
	Nitrite (NO_2 as N) 615	mg/L

	Ag-Silver 46566	ug/L
	Al-Aluminum 46557	ug/L
	As-Arsenic 46551	ug/L
	Ba-Barium 46558	ug/L
	Ca-Calcium 46552	mg/L
	Cd-Cadmium 46559	ug/L
	Cr-Chromium 46559	ug/L
	Cu-Copper 46562	ug/L
	Fe-Iron 46563	ug/L
	Hg-Mercury 71900	ug/L
	K-Potassium 46555	mg/L
	Mg-Magnesium 46554	mg/L
	Mn-Manganese 46565	ug/L
	Na-Sodium 46556	mg/L
	Ni-Nickel	ug/L
	Pb-Lead 46564	ug/L
	Se-Selenium	ug/L
	Zn-Zinc 46567	ug/L

	Organochlorine Pesticides
	Organophosphorus Pesticides
	Nitrogen Pesticides
	Acid Herbicides
	PCBs
	Semivolatile Organics
	TPH-Diesel Range
X	Volatile Organics (VOA bottle)
	TPH-Gasoline Range
	TPH-BTEX Gasoline Range

LAB USE ONLY
Temperature on arrival (°C): 1.6

Lab Comments _____

GW-54 REV. 7/03 For Dissolved Analysis-submit filtered sample and write "DIS" in block.

DWM
1HS

Michael F. Easley, Governor

William G. Ross Jr., Secretary
North Carolina Department of Environment and Natural Resources

Coleen Sullins, Director
Division of Water Quality

September 29, 2008

To: Owner /Resident
Re: Water Sample Lab No. AB35625

Recently, it has been discovered that some water supply wells in your area contain detectable amounts of pesticides and associated chemicals that were in use more than 25 years ago when this area was primarily agricultural land.

Below, please find information related to sampling conducted on the water supply well for this residence.

[✓] Based on the sample results, your water is safe for all uses. It is recommended that the water be tested every six months to make sure it is still safe.

[ ] Based on the sample results, elevated levels of the pesticides were detected. It is recommended that the water should not be used for cooking or drinking. Also, it is recommended that showering and bathing should be limited to less than 10 minutes.

The above usage guidelines were provided by Dr. Ken Rudo, toxicologist with the North Carolina Division of Public Health. **If you have further questions about the usage recommendations, Dr. Rudo can be reached at (919) 707-5911 or through the division's main number at (919) 707-5900.**

This well was sampled by the North Carolina Division of Water Quality. Samples of water were collected and analyzed for chemicals known as volatile organics. Volatile organics are manmade chemicals and are used in many applications, including pesticides. Although the chemicals detected in some of the wells in this area are no longer being used in pesticides, they can remain in the groundwater for long periods of time.

The Division of Water Quality is committed to providing you with additional information, as may be needed. If you have questions about the investigation of this issue, you may contact Stephen Barnhardt, Aquifer Protection Section Supervisor for the Fayetteville Regional Office by calling (910) 433-3336.

Sincerely,

JIM BARBER

FOR Stephen A. Barnhardt

NC DWQ Laboratory Section Results

County:	RICHMOND	Sample ID:	AB35625
River Basin		PO Number #	8G1282
Report To	FROAP	Date Received:	09/18/2008
Collector:	B TODD	Time Received:	08:00
Region:	FRO	Labworks LoginID	SMATHIS
Sample Matrix:	GROUNDWATER	Date Reported:	9/23/08
Loc. Type:	WATER SUPPLY	Report Generated:	09/23/2008
Emergency Yes/No	YES		
COC Yes/No	YES		

VisitID

Loc. Descr.: ANNA HARRISON

QC 9/25/08

Location ID:	Collect Date:	Collect Time::	Sample Depth
6I077961NC177	09/17/2008	13:16	

Sample Qualifiers and Comments

SEP 29 2008

Routine Qualifiers

For a more detailed description of these qualifier codes refer to www.dwqlab.org under Staff Access

A-Value reported is the average of two or more determinations
B1-Countable membranes with <20 colonies; Estimated
B2- Counts from all filters were zero.
B3- Countable membranes with more than 60 or 80 colonies; Estimated
B4-Filters have counts of both >60 or 80 and < 20; Estimated
B5-Too many colonies were present; too numerous to count (TNTC)
J2- Reported value failed to meet QC criteria for either precision or accuracy; Estimated
J3-The sample matrix interfered with the ability to make any accurate determination; Estimated
J6-The lab analysis was from an unpreserved or improperly chemically preserved sample; Estimated
N1-The component has been tentatively identified based on mass spectral library search and has an estimated value
N3-Estimated concentration is < PQL and >MDL
NE-No established PQL
P-Elevated PQL due to matrix interference and/or sample dilution
Q1-Holding time exceeded prior to receipt at lab.
Q2- Holding time exceeded following receipt by lab
PQL- Practical Quantitation Limit-subject to change due to instrument sensitivity
U- Samples analyzed for this compound but not detected
X1- Sample not analyzed for this compound

LAB

NC DWQ Laboratory Section Results

Location ID: 6I077961NC177
Loc. Descr.: ANNA HARRISON
Visit ID

Sample ID: AB35625
Collect Date: 09/17/2008
Collect Time:: 13:16

CAS #	Analyte Name	PQL	Result	Qualifier	Units	Analyst/Date	Approved By /Date
	Sample temperature at receipt by lab		1.6		°C	HPARKER 9/18/08	SMATHIS 9/18/08
	Method Reference						
VOL							
	Volatile Organics In liquid		_TITLE_		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
75-78-1	Dichlorodifluoromethane	1.0	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
74-87-3	Chloromethane	0.50	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
75-01-4	Vinyl Chloride	0.50	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
74-83-9	Bromomethane	0.50	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
75-00-3	Chloroethane	0.50	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
75-69-4	Trichlorofluoromethane	0.50	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
75-35-4	1,1-Dichloroethene	0.25	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
75-09-2	Methylene Chloride	10	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
156-60-5	trans-1,2-Dichloroethene	0.25	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
1634-04-4	Methyl Tert-Butyl Ether	0.25	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
75-34-3	1,1-Dichloroethane	0.25	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
156-59-4	cis-1,2-Dichloroethene	0.25	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
74-97-5	Bromochloromethane	0.25	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
67-66-3	Chloroform	0.25	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
590-20-7	2,2-Dichloropropane	0.25	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
107-06-2	1,2-Dichloroethane	0.25	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						

NC DWQ Laboratory Section Results

Location ID: 6I077961NC177
Loc. Descr.: ANNA HARRISON
Visit ID

Sample ID: AB35625
Collect Date: 09/17/2008
Collect Time:: 13:16

CAS #	Analyte Name	PQL	Result	Qualifier	Units	Analyst/Date	Approved By /Date
71-55-6	1,1,1-Trichloroethane	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
563-58-6	1,1-Dichloropropene	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
56-23-5	Carbon Tetrachloride	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
71-43-2	Benzene	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
74-95-3	Dibromomethane	1.0	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
78-87-5	1,2-Dichloropropane	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
79-01-6	Trichloroethene	0.25	0.12	N3	ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
75-27-4	Bromodichloromethane	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
10061-01-5	cis-1,3-Dichloropropene	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
10061-02-6	trans-1,3-Dichloropropene	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
79-00-5	1,1,2-Trichloroethane	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
108-88-3	Toluene	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
142-28-9	1,3-Dichloropropane	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
124-48-1	Dibromochloromethane	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
106-93-4	(EDB)1,2-Dibromoethane	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
127-18-4	Tetrachloroethene	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
108-90-7	Chlorobenzene	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
100-41-4	Ethylbenzene	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08

NC DWQ Laboratory Section Results

Location ID: 6I077961NC177
Loc. Descr.: ANNA HARRISON
Visit ID

Sample ID: AB35625
Collect Date: 09/17/2008
Collect Time:: 13:16

CAS #	Analyte Name	PQL	Result	Qualifier	Units	Analyst/Date	Approved By /Date
75-25-2	Bromoform	1.0	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
108-38-3	m,p-Xylene	0.50	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
100-42-5	Styrene	0.25	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
79-34-5	1,1,2,2-Tetrachloroethane	0.25	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
630-20-6	1,1,1,2-Tetrachloroethane	0.25	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
95-47-6	o-Xylene	0.25	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
96-18-4	1,2,3-Trichloropropane	0.25	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
98-82-8	Isopropylbenzene	0.25	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
108-86-1	Bromobenzene	0.25	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
103-65-1	n-Propylbenzene	0.25	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
95-49-8	2-Chlorotoluene	0.25	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
106-43-4	4-Chlorotoluene	0.25	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
108-67-8	1,3,5-Trimethylbenzene	0.25	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
98-06-6	tert-Butylbenzene	0.25	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
95-63-6	1,2,4-Trimethylbenzene	0.25	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
135-98-8	sec-Butylbenzene	0.25	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
543-73-1	m-Dichlorobenzene (1,3)	0.25	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
106-46-7	p-Dichlorobenzene (1,4)	0.25	0.26		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						

NC DWQ Laboratory Section Results

Location ID: 6I077961NC177
Loc. Descr.: ANNA HARRISON
Visit ID

Sample ID: AB35625
Collect Date: 09/17/2008
Collect Time:: 13:16

CAS #	Analyte Name	PQL	Result	Qualifier	Units	Analyst/Date	Approved By /Date
95-50-1	o-Dichlorobenzene (1,2)	0.25	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
99-87-6	p-Isopropyltoluene	0.25	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
104-51-8	n-Butylbenzene	0.25	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
120-82-1	1,2,4-Trichlorobenzene	0.50	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
91-20-3	Naphthalene	0.50	0.32	N3	ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
87-68-3	Hexachlorobutadiene	0.50	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
87-61-6	1,2,3-Trichlorobenzene	1.0	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						

GROUNDWATER FIELD/LAB FORM

861282

North Carolina
Department of Environment and Natural Resources
DIVISION OF WATER QUALITY-GROUNDWATER SECTION

Location code [redacted]61077961 NC 177

County Richmond

Quad No _____ Serial No. _____

Lat _____ Long. _____

SAMPLE TYPE: [x] Water [ ] Soil [ ] Other [x] Chain of Custody

SAMPLE PRIORITY: [ ] Routine [x] Emergency

961 NC177

Lab Number AB35625

Date Received 9/18/08 Time: 0800

Rec'd By: HP From: Bus, (Courier), Hand Del., Other: _____

Data Entry By: _____ Ck: _____

Date Reported: _____

Report To: ARO, (FRO), MRO, RRO, WaRO, WiRO, WSRO, Kinston FO, Fed. Trust, Central Off., Other: _____

Shipped by: Bus, (Courier), Hand Del., Other: _____

Collector(s): BillTodd

Purpose: Date 09/17/08 Time 1:16 Baseline, (Complaint) Compliance, LUST, Pesticide Study, Federal Trust, Other: _____ (circle one)

FIELD ANALYSES

pH 400 _____ Spec. Cond. 94 _____ at 25°C

Temp. 10 _____ °C Odor _____

Appearance _____

Field Analysis By: BillTodd

Owner Anna Harrison

Location or Site 961 N Hwy 177

Description of sampling point outside tap

Sampling Method Pump (Pump, bailer, etc.) Sample Interval _____

Remarks control # 124 (Pumping time, air temp., etc.)

LABORATORY ANALYSES

	BOD 310	mg/L
	COD High 340	mg/L
	COD Low 335	mg/L
	Coliform: MF Fecal 31616	/100ml
	Coliform: MF Total 31504	/100ml
	TOC 680	mg/L
	Turbidity 76	NTU
	Residue, Suspended 530	mg/L
	pH 403	units
	Alkalinity to pH 4.5 410	mg/L
	Alkalinity to pH 8.3 415	mg/L
	Carbonate 445	mg/L
	Bicarbonate 440	mg/L
	Carbon dioxide 405	mg/L
	Chloride 940	mg/L
	Chromium: Hex 1032	ug/L
	Color: True 80	CU
	Cyanide 720	mg/L

	Diss. Solids 70300	mg/L
	Fluoride 951	mg/L
	Hardness: Total 900	mg/L
	Hardness (non-carb) 902	mg/L
	Phenols 32730	ug/l
	Specific Cond. 95	uMhos/cm
	Sulfate 945	mg/L
	Sulfide 745	mg/L
	Oil and Grease	mg/L
	NH_3 as N 610	mg/L
	TKN as N 625	mg/L
	$NO_2 + NO_3$ as N 630	mg/L
	P: Total as P 665	mg/L
	Nitrate (NO_3 as N) 620	mg/L
	Nitrite (NO_2 as N) 615	mg/L

	Ag-Silver 46566	ug/L
	Al-Aluminum 46557	ug/L
	As-Arsenic 46551	ug/L
	Ba-Barium 46558	ug/L
	Ca-Calcium 46552	mg/L
	Cd-Cadmium 46559	ug/L
	Cr-Chromium 46559	ug/L
	Cu-Copper 46562	ug/L
	Fe-Iron 46563	ug/L
	Hg-Mercury 71900	ug/L
	K-Potassium 46555	mg/L
	Mg-Magnesium 46554	mg/L
	Mn-Manganese 46565	ug/L
	Na-Sodium 46556	mg/L
	Ni-Nickel	ug/L
	Pb-Lead 46564	ug/L
	Se-Selenium	ug/L
	Zn-Zinc 46567	ug/L

	Organochlorine Pesticides	
	Organophosphorus Pesticides	
	Nitrogen Pesticides	
	Acid Herbicides	
	PCBs	
	Semivolatile Organics	
	TPH-Diesel Range	
X	Volatile Organics (VOA bottle)	V
	TPH-Gasoline Range	
	TPH-BTEX Gasoline Range	

LAB USE ONLY
Temperature on arrival (°C): 1.6

Lab Comments _____

GW-54 REV. 7/03 For Dissolved Analysis-submit filtered sample and write "DIS" in block.

Michael F. Easley, Governor

William G. Ross Jr., Secretary
North Carolina Department of Environment and Natural Resources

Coleen Sullins, Director
Division of Water Quality

September 29, 2008

To: Owner /Resident
Re: Water Sample Lab No. AB35629

Recently, it has been discovered that some water supply wells in your area contain detectable amounts of pesticides and associated chemicals that were in use more than 25 years ago when this area was primarily agricultural land.

Below, please find information related to sampling conducted on the water supply well for this residence.

[ ] Based on the sample results, your water is safe for all uses. It is recommended that the water be tested every six months to make sure it is still safe.

[ ] Based on the sample results, elevated levels of the pesticides were detected. It is recommended that the water should not be used for cooking or drinking. Also, it is recommended that showering and bathing should be limited to less than 10 minutes.

The above usage guidelines were provided by Dr. Ken Rudo, toxicologist with the North Carolina Division of Public Health. **If you have further questions about the usage recommendations, Dr. Rudo can be reached at (919) 707-5911 or through the division's main number at (919) 707-5900.**

This well was sampled by the North Carolina Division of Water Quality. Samples of water were collected and analyzed for chemicals known as volatile organics. Volatile organics are manmade chemicals and are used in many applications, including pesticides. Although the chemicals detected in some of the wells in this area are no longer being used in pesticides, they can remain in the groundwater for long periods of time.

The Division of Water Quality is committed to providing you with additional information, as may be needed. If you have questions about the investigation of this issue, you may contact Stephen Barnhardt, Aquifer Protection Section Supervisor for the Fayetteville Regional Office by calling (910) 433-3336.

Sincerely,

Stephen A. Barnhardt

North Carolina DWQ/Aquifer Protection Section 225 Green St./ Suite 714 Fayetteville, NC 28301 Phone (910) 433-3300
FAX (910) 486-0707 Internet: h2o.enr.state.nc.us Customer Service 1-877-623-6748

NC DWQ Laboratory Section Results

County:	RICHMOND
River Basin	
Report To	FROAP
Collector:	B TODD
Region:	FRO
Sample Matrix:	GROUNDWATER
Loc. Type:	WATER SUPPLY
Emergency Yes/No	YES
COC Yes/No	YES

DIVISION OF WATER QUALITY DWQ

Sample ID:	AB35629
PO Number #	8G1286
Date Received:	09/18/2008
Time Received:	08:00
Labworks LoginID	SMATHIS
Date Reported:	9/23/08
Report Generated:	09/23/2008

VisitID

Loc. Descr.: WILLIAM BROWN

QC 9/25/08

Location ID:	Collect Date:	Collect Time::	Sample Depth
6I077115FR	09/17/2008	13:04	

Sample Qualifiers and Comments

SEP 25 1:03

Routine Qualifiers

For a more detailed description of these qualifier codes refer to www.dwqlab.org under Staff Access

A-Value reported is the average of two or more determinations
B1-Countable membranes with <20 colonies; Estimated
B2- Counts from all filters were zero.
B3- Countable membranes with more than 60 or 80 colonies; Estimated
B4-Filters have counts of both >60 or 80 and < 20; Estimated
B5-Too many colonies were present; too numerous to count (TNTC)
J2- Reported value failed to meet QC criteria for either precision or accuracy; Estimated
J3-The sample matrix interfered with the ability to make any accurate determination; Estimated
J6-The lab analysis was from an unpreserved or improperly chemically preserved sample; Estimated
N1-The component has been tentatively identified based on mass spectral library search and has an estimated value
N3-Estimated concentration is < PQL and >MDL
NE-No established PQL
P-Elevated PQL due to matrix interference and/or sample dilution
Q1-Holding time exceeded prior to receipt at lab.
Q2- Holding time exceeded following receipt by lab
PQL- Practical Quantitation Limit-subject to change due to instrument sensitivity
U- Samples analyzed for this compound but not detected
X1- Sample not analyzed for this compound

LAB

CAS #	Analyte Name	PQL	Result	Qualifier	Units	Analyst/Date	Approved By /Date
	Sample temperature at receipt by lab		1.6		°C	HPARKER	SMATHIS
	Method Reference					9/18/08	9/18/08
VOL							
	Volatile Organics in liquid		_TITLE_		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
75-78-1	Dichlorodifluoromethane	1.0	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
74-87-3	Chloromethane	0.50	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
75-01-4	Vinyl Chloride	0.50	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
74-83-9	Bromomethane	0.50	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
75-00-3	Chloroethane	0.50	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
75-69-4	Trichlorofluoromethane	0.50	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
75-35-4	1,1-Dichloroethene	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
75-09-2	Methylene Chloride	10	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
156-60-5	trans-1,2-Dichloroethene	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
1634-04-4	Methyl Tert-Butyl Ether	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
75-34-3	1,1-Dichloroethane	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
156-59-4	cis-1,2-Dichloroethene	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
74-97-5	Bromochloromethane	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
67-66-3	Chloroform	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
590-20-7	2,2-Dichloropropane	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
107-06-2	1,2-Dichloroethane	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08

NC DWQ Laboratory Section Results

Location ID: 6I077115FR
Loc. Descr.: WILLIAM BROWN
Visit ID

Sample ID: AB35629
Collect Date: 09/17/2008
Collect Time:: 13:04

CAS #	Analyte Name	PQL	Result	Qualifier	Units	Analyst/Date	Approved By /Date
71-55-6	1,1,1-Trichloroethane	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
563-58-6	1,1-Dichloropropene	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
56-23-5	Carbon Tetrachloride	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
71-43-2	Benzene	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
74-95-3	Dibromomethane	1.0	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
78-87-5	1,2-Dichloropropane	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
79-01-6	Trichloroethene	0.25	1.2		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
75-27-4	Bromodichloromethane	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
10061-01-5	cis-1,3-Dichloropropene	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
10061-02-6	trans-1,3-Dichloropropene	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
79-00-5	1,1,2-Trichloroethane	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
108-88-3	Toluene	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
142-28-9	1,3-Dichloropropane	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
124-48-1	Dibromochloromethane	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
106-93-4	(EDB)1,2-Dibromoethane	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
127-18-4	Tetrachloroethene	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
108-90-7	Chlorobenzene	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
100-41-4	Ethylbenzene	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08

NC DWQ Laboratory Section Results

Location ID: 6I077115FR
Loc. Descr.: WILLIAM BROWN
Visit ID

Sample ID: AB35629
Collect Date: 09/17/2008
Collect Time:: 13:04

CAS #	Analyte Name	PQL	Result	Qualifier	Units	Analyst/Date	Approved By /Date
75-25-2	Bromoform	1.0	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
108-38-3	m,p-Xylene	0.50	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
100-42-5	Styrene	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
79-34-5	1,1,2,2-Tetrachloroethane	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
630-20-6	1,1,1,2-Tetrachloroethane	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
95-47-6	o-Xylene	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
96-18-4	1,2,3-Trichloropropane	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
98-82-8	Isopropylbenzene	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
108-86-1	Bromobenzene	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
103-65-1	n-Propylbenzene	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
95-49-8	2-Chlorotoluene	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
106-43-4	4-Chlorotoluene	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
108-67-8	1,3,5-Trimethylbenzene	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
98-06-6	tert-Butylbenzene	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
95-63-6	1,2,4-Trimethylbenzene	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
135-98-8	sec-Butylbenzene	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
543-73-1	m-Dichlorobenzene (1,3)	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08
106-46-7	p-Dichlorobenzene (1,4)	0.25	Not detected		ug/L	VANDREWS	RKELLING
	Method Reference EPA5030/624/8260					9/18/08	9/23/08

NC DWQ Laboratory Section Results

Location ID: 6I077115FR
Loc. Descr.: WILLIAM BROWN
Visit ID

Sample ID: AB35629
Collect Date: 09/17/2008
Collect Time:: 13:04

CAS #	Analyte Name	PQL	Result	Qualifier	Units	Analyst/Date	Approved By /Date
95-50-1	o-Dichlorobenzene (1,2)	0.25	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
99-87-6	p-Isopropyltoluene	0.25	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
104-51-8	n-Butylbenzene	0.25	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
120-82-1	1,2,4-Trichlorobenzene	0.50	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
91-20-3	Naphthalene	0.50	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
87-68-3	Hexachlorobutadiene	0.50	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						
87-61-6	1,2,3-Trichlorobenzene	1.0	Not detected		ug/L	VANDREWS 9/18/08	RKELLING 9/23/08
	Method Reference EPA5030/624/8260						

8G1286

GROUNDWATER FIELD/LAB FORM

North Carolina
Department of Environment and Natural Resources
DIVISION OF WATER QUALITY-GROUNDWATER SECTION

Location code [redacted]6107115 FR

County Richmond

Quad No _____ Serial No. _____
Lat. _____ Long. _____

SAMPLE TYPE: ☑ Water ☐ Soil ☐ Other ☑ Chain of Custody

SAMPLE PRIORITY: ☐ Routine ☑ Emergency

115FR

Lab Number AB35629

Date Received 9/18/08 Time: 0800

Rec'd By: HP From: Bus, Courier, Hand Del., Other: _____

Data Entry By: _____ Ck: _____

Date Reported: _____

Report To: ARO, FRO, MRO, RRO, WaRO, WiRO, WSRO, Kinston FO, Fed. Trust, Central Off., Other: _____

Shipped by: Bus, Courier, Hand Del., Other: _____

Collector(s): BillTodd

Date 09/17/08 Time 1:04

Purpose: Baseline, Complaint, Compliance, LUST, Pesticide Study, Federal Trust, Other: _____ (circle one)

FIELD ANALYSES

pH 400 _____ Spec. Cond. 94 _____ at 25°C

Temp. 10 _____ °C Odor _____

Appearance _____

Field Analysis By: BillTodd

Owner William Brown

Location or Site 115 Fruitland Road

Description of sampling point outside tap

Sampling Method pump (Pump, bailer, etc.) Sample Interval _____

Remarks Control # 131 (Pumping time, air temp., etc.)

LABORATORY ANALYSES

	BOD 310	mg/L
	COD High 340	mg/L
	COD Low 335	mg/L
	Coliform: MF Fecal 31616	/100ml
	Coliform: MF Total 31504	/100ml
	TOC 680	mg/L
	Turbidity 76	NTU
	Residue, Suspended 530	mg/L
	pH 403	units
	Alkalinity to pH 4 5 410	mg/L
	Alkalinity to pH 8.3 415	mg/L
	Carbonate 445	mg/L
	Bicarbonate 440	mg/L
	Carbon dioxide 405	mg/L
	Chloride 940	mg/L
	Chromium: Hex 1032	ug/L
	Color: True 80	CU
	Cyanide 720	mg/L

	Diss. Solids 70300	mg/L
	Fluoride 951	mg/L
	Hardness: Total 900	mg/L
	Hardness (non-carb) 902	mg/L
	Phenols 32730	ug/l
	Specific Cond. 95	uMhos/cm
	Sulfate 945	mg/L
	Sulfide 745	mg/L
	Oil and Grease	mg/L
	NH_3 as N 610	mg/L
	TKN as N 625	mg/L
	$NO_2 + NO_3$ as N 630	mg/L
	P: Total as P 665	mg/L
	Nitrate (NO_3 as N) 620	mg/L
	Nitrite (NO_2 as N) 615	mg/L

	Ag-Silver 46566	ug/L
	Al-Aluminum 46557	ug/L
	As-Arsenic 46551	ug/L
	Ba-Barium 46558	ug/L
	Ca-Calcium 46552	mg/L
	Cd-Cadmium 46559	ug/L
	Cr-Chromium 46559	ug/L
	Cu-Copper 46562	ug/L
	Fe-Iron 46563	ug/L
	Hg-Mercury 71900	ug/L
	K-Potassium 46555	mg/L
	Mg-Magnesium 46554	mg/L
	Mn-Manganese 46565	ug/L
	Na-Sodium 46556	mg/L
	Ni-Nickel	ug/L
	Pb-Lead 46564	ug/L
	Se-Selenium	ug/L
	Zn-Zinc 46567	ug/L

	Organochlorine Pesticides
	Organophosphorus Pesticides
	Nitrogen Pesticides
	Acid Herbicides
	PCBs.
	Semivolatile Organics
	TPH-Diesel Range
X	Volatile Organics (VOA bottle)
	TPH-Gasoline Range
	TPH-BTEX Gasoline Range

LAB USE ONLY
Temperature on arrival (°C): 1.6

Lab Comments _____

GW-54 REV 7/03 For Dissolved Analysis-submit filtered sample and write "DIS" in block.